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November 30, 1983

The Honourable Gerard Lecuyer
Minister of Environment and
Workplace Safety and Health
333 Legislative Building
Winnipeg, Manitoba
R3C 0V8

Dear Mr. Lecuyer:

I have the honour to present herewith Annual Report Eleven of your Council.

This report details the Council's activities during the fiscal year ending March 31, 1983, and includes information regarding the Annual Meeting held on May 13, 1983.

Yours truly,

A.C. Maniar

Dr. A. C. Maniar
Chairman

encl.

ACM/ls

Table of Contents

Chairman's Report — Bill Kennedy 1

Minister's Address — The Hon. Jay Cowan 2

Regional Reports

- Central Plains — J. A. Knight 4
- Interlake — Bill Aitken 4
- Northern — E. B. Johanson 5
- Parkland — Barry Wild 6
- Pembina Valley — Betty Pawlicki 8
- Winnipeg — J. F. Palamarchuk 8

Technical Committee Reports

- Environmental Education — Ron Phillips 9
- Environmental Chemicals — D. F. Malley & D. Muir 10
- Membership — F. J. Humphries 11
- Land Use — Rod Fowler 12
- Publications — Gunter A. Schoch 12
- Nominating — Basil M. Rotoff 14
- Wildlife — Jim Nickels 14

Revised Bylaws 15

Executive Secretary's Report 20

Briefs

- Monitoring Ground Water in Manitoba for Environmental Contaminants 21
- Brief #1: Curriculum on Insect Pest Control in Manitoba 22
- Brief #2: Public Education on Methods of Pest Control 22
- Brief #3: Establishment of a Pesticide Control Branch 23
- Brief #4: Hunting of Timber Wolves 24
- Brief #5: Illegal Hunting 24
- Brief #6: Preservation of Wildlife Habitat and the Noxious Weeds Act 24
- Brief #7: Manitoba Environmental Network of Government Agencies 26
- Brief #8: Pre-School Environmental Education 26
- Brief #9: Co-ordinated Planning of Environmental Education by Government and Private Agencies 27
- Brief #10: Provincial Land Use Policies 28

Environmental Advisory Councils — Bill Kennedy 29

Garrison Diversion Update — Bill Aitken 30

Responses to Briefs — Basil Rotoff 31

Membership in MEC

- Honourary Members 32
- Advisors 32
- Charter Members 32
- Council Members 32
- Council Organizations 33
- Past Chairmen 33

Finances 33

Publications 34

Council Staff 34

Colophon 34

Chairman's Report

Bill Kennedy

The year 1982-83 was a very busy one for the Manitoba Environmental Council, its Board of Directors, and Executive. A number of important briefs were considered by Council, and most of them were forwarded to the Minister of Environment, the Honourable Jay Cowan, with recommendations for follow-up action by the Province of Manitoba.

There was only one brief which was distinctly urban in character which provided a critique of the Province's Mosquito Control Program. Other Council briefs, reflecting its concern for the Manitoba rural environment, included recommendations on the monitoring of ground water, a brief requesting more restrictions on the hunting of timber wolves, a brief highlighting concerns with respect to illegal hunting, and a brief recommending revisions to the Manitoba Noxious Weeds Act in conjunction with increased concern for the preservation of wildlife habitat.

The 1982-83 agenda also included consideration of a number of province-wide environmental concerns. One Council brief recommended the inclusion of a high school curriculum on pesticide control, another recommended the establishment of pre-school environmental education, while a third brief called for more information-sharing on environmental literature and materials between provincial departments and local municipalities. A further brief called for co-ordinated planning of environmental education by the numerous public and private environmental bodies which exist in Manitoba.

The Province's "Manitoba Land Use Policies" were critiqued in another Environmental Council brief, and a recommendation was made that these policies should include guidelines for the regulation of agricultural land use, the primary land user in the province. Another important brief, considered but not yet approved by Council, recommended an end to nuclear arms build-up and opposition to cruise missile testing in Canada.

From the above, it can be easily seen that the Council's environmental concerns go far beyond the jurisdictional limits of the Environment Department.

The Regional Chairmen from various parts of the province also kept Council up-to-date on the key environmental issues of concern in their respective regions. The Northern region reported concerns to Council with respect to oil exploration in Hudson Bay and the need for more protection of seals, rare birds and whales. Other concerns raised included the acid rain issue, pollution stemming from hydro-electric development, and the issue of conflicting land uses which are apparent near The Pas, where agricultural issues appear to conflict with resource extraction in both trapping and fish production.

The Parklands representative reported concerns in that area about poaching, the illegal use of snares, unnecessary open limits on bears, Dauphin Lake pollution, the setting aside of additional wildlife preserves, the need for replanting of forest resources, rail-line abandonment, the over-use of road salt, and a recent ammonia spill.

From the Interlake Region the Council representative raised concerns about rail-line abandonment, drainage problems, the need for fish ladders, unusually high sheep kills, the need for natural methods of predator discouragement, and the important Garrison Diversion issue.

From the Central Plains Region concerns were raised about the Assiniboine River diversion, the need for continuing the pesticide container disposal program, and the need for improved methods of soil conservation.

From Pembina Valley we heard about the need for improved drainage, problems with respect to adequate water supply for towns, and the finding of the remains of prehistoric relics in the bentonite mines area near Morden.

Representatives of the Council were also active over the course of the year in participating at Clean Environment Commission hearings, in organizing for National Environment Week, and also in organizing and participating in the recent Symposium on Hazardous and Special Wastes in Manitoba. A number of excellent publications were also produced by the Council over the past year which will be described elsewhere in this Annual Report.

One of the more ambitious projects undertaken by the Council this past year was the Organizational Review conducted by the Social Planning Council of Winnipeg. The purpose of this review by an outside consultant was to provide an evaluation of the Council's effectiveness in passing on environmental advice, and also the administrative efficiency in conducting its work and providing the best value for the budget funds available. Following a mail-out questionnaire to all Council members and numerous personal interviews with both members of Council and Government alike, the review revealed several shortcomings of the Council. It was reported that the Council lacked an orderly system of setting priorities

and budgeting funds. Council lacked financial and staff resources to properly carry out its work. Council required a better mechanism, such as a newsletter, to inform its membership of events between the twice-yearly meetings.

Recommendations by the Social Planning Council for the re-structuring of our organization included the redirection of more resources to the Technical Committees and the Regional Committees, as well as the need for better overall strategic planning. In addition, it was recommended that the Council be re-designated as a distinct advisory body to the Minister outside of the line department function, and that staff be seconded to the Council and be directly accountable to the Board of Directors through the Chairman. At the May 1983 Annual Meeting, Council gave approval to the new Board to take on the task of implementing the general directions contained in the consultant's report, even though specific recommendations may require some modification.

On the bright side, the consultant's evaluation found that the Council is a valuable resource, that its publications have attracted positive comment, and that its members have been effective in influencing environmental policy formulation. It also found the Council to be unique among advisory bodies, as it maintained its advisory role to the Minister, while retaining its independence to publish and speak freely on environmental issues. In short, it has the best of both worlds.

Overall, 1982-83 was a very active and eventful year. Environmental briefs and issues covered a wide range of matters from southern to northern Manitoba, and from rural to urban areas. The organizational review provided interesting insights into the Council's operations, and although it has been difficult for some to come to grips with needed structural changes, it will be in the Council's long-term interest to better equip itself in providing meaningful environmental advice over the long term.

Minister's Address

Honourable Jay Cowan

Thank you, Mr. Chairman and delegates. Again I want to thank you for the opportunity to spend some time with you during the course of your meeting. I have had an opportunity to do so on a number of occasions and always have found it to be a productive time from my perspective. I also want to once again assure you that the advice which you have been providing to the government through me by way of briefs and conversations and dialogues is being considered and analyzed. I think it is helping us pursue objectives which we share in common in a realistic and rational way, a way which allows us to bring forward the best possible environmental protection given the circumstances of the day. So I want to take this opportunity to especially thank you for your continuing interest, for your well-thought out and comprehensive briefs and for the opportunity to continue the dialogue.

I want to be very brief in my remarks today because as you are probably aware, we are going into our session shortly, but I did want to bring a message or two to your group today.

I want to talk about the Throne Speech, which some of you may not have had an opportunity to see in detail. Although the press reports picked up on the larger aspects of the Throne Speech, some of you may not have heard about what it contained in respect to the Manitoba environment.

Firstly, we are going to be, over the course of this session, asking the Legislature to approve the formation of a Department of Environment and Workplace Safety and Health. This is in recognition of the inter-relationship between the internal environment of the workplace and the external environment of a more general nature. We have already begun, in an administrative way, to co-ordinate many of the activities with respect particularly to the response mechanisms of both divisions — the Environmental Management Division and the Workplace Safety and Health Division. Many of you are aware that, a while back, we officially inaugurated the Environmental Management Division Mobile Monitoring Unit (MMU). That has been used as well by the Workplace Safety and Health Division.

There are also numerous other areas where the expertise of one division and the staff within that division, complements the expertise in the other division. We felt, by combining those two now separate entities into one department, that we would be making a cost efficient change as well as a change which will allow one division to

build upon the activities of the other, to make a vehicle for the protection of the internal and external environment that is more powerful than those two single vehicles added together. In other words, we're trying to work towards a synergistic effect in respect to those two divisions.

We are going to need your assistance in the course of activities as we begin to bring those two divisions together. I know you haven't always dealt with those sort of administrative details, but I think when we're on the threshold of a major change such as this, we have to call in all the expertise outside of the government which we can muster. And we have to listen very carefully to the suggestions as well as the criticisms which they provide to us, and we will be doing that. Over the next number of months you will be receiving materials which will more fully outline our intentions. We will be providing these to you, not as a "fait accompli" but as a document for dialogue, as a discussion paper, so that we can get your response to it as well as the response of many others — industry, labour unions, the general populace — before we make the actual changes. I would like to see those changes occur over the course of the next six months, but I don't intend to lock myself into that figure by making a concrete statement in that regard, but I do want you to have some idea of the time frame.

We are also continuing our work in respect to hazardous waste and the management of such. You have probably noticed that during the last number of weeks we have discussed a formal process of developing a hazardous and special waste management program. During the course of the Legislature, and it is indicated in the Throne Speech, we will be bringing forward a Hazardous Materials Act, and of course those of you who are familiar with the process know there will be opportunity for dialogue once that legislation has been tabled. However, we have a responsibility to present it to my colleagues in the Legislature previous to presenting it outside of the Legislature. So once we have tabled that document and have it in the traditional way presented to the Legislature, you will be receiving copies of it and of course you will be asked to provide comments.

Also, we are going to be conducting, hopefully, an international seminar next spring on hazardous waste management. We are doing that because we know there is quite a bit of expertise in the academic field, both within this country and outside this country, which can assist in developing the best possible program. We have an ulterior motive in that respect also, and that is we know that many other jurisdictions, which have attempted to develop hazardous waste programs, have suffered and encountered some difficulty throughout that process. We hope, by bringing all those people together in the same room, that we can learn from their mistakes as well as learn from their successes.

I am confident, and I hope you share that confidence, that when we discuss this matter, say this time next year, we will be able to discuss in very concrete terms some of the progress which has been made, not only by way of legislation but by way of program and program delivery.

I want to emphasize that this is a very public process, because it is so important to each individual citizen of this province. We have built within the system at every juncture, at every step along the way, full public participation. This not only includes organizations such as the Council, but also includes individuals and other organizations who may want to come forward with ideas and suggestions. We need and solicit that help, and we do so in the most sincere and complimentary way. We have some ideas, but we know that there are others out there who share the goal and have ideas which may in fact be better than ours. So we are being humble about it and at the same time we think we've put together a positive approach to waste management that doesn't just mean dumping them somewhere. We want to be taking a look at how they enter our system, how they progress through our system, and how they can be disposed of in other ways than just dumping them in the ground or burning them in an incinerator. How would you make the most productive use of them throughout? So we want some innovative and imaginative assistance and we'll be asking you for the same.

There are a number of other activities which are ongoing and will continue to be a part of the work of the Department. I know you address many of those activities during the course of your discussions, and Mr. Chairperson, I am looking forward to seeing the results of those discussions by way of briefs, personal conversations and any other method of dialogue to ensure that we are seeking common objectives in a common way. I encourage you to provide that information and assistance to us. And where you feel it is necessary to be critical, we ask for that criticism — we solicit it as well as a compliment once in a while, if we're doing something right — and that, of course, is a value judgement on each of our parts. But we do solicit that criticism as well as the suggestions because we know as a government, and I know as a Minister, that while our intentions may be the best, and we think they are, sometimes we have trouble translating

those intentions into good programs, and where we have made minor errors (and they are always of a minor nature!), we like to catch them before they become major.

So thank you very much for the opportunity to be with you here today, and may I wish you the best of luck in your deliberations during this your fall meeting of 1982. Thank you.

* * *

Presented at December 3, 1982 meeting

The Hon. Jay Cowan addressed the MEC Annual Meeting held on May 13, 1983. He congratulated the Chairman and the Executive for their work over the past two years, and asked for continued advice and advocacy. He requested the Council's help in destroying the myth that environmental protection and environmental progress were mutually exclusive and contraproductive. He cited the vinyl chloride industry in the U.S.A. and stated that lessons could be learned from that experience.

Mr. Cowan stated that the Government had responded to the Mosquito Control Program by increased emphasis on adult larviciding and through the regulations for the use of pesticides (100 metre buffer zone).

New activities are centering around the development of a Hazardous and Special Waste Management Program. The Minister stated that he will be calling on the Clean Environment Commission to receive consultation from the general public, enabling him to act on this and other advice which has already come forward for the disposal of wastes in a sound and safe way. "Cradle to the Grave" control has been revised to "Cradle to Resurrection" control so that end products can be effectively used. He stressed the need for a process where one can make trade-offs with innovative new industries which provide long-term benefits for the Province.

Mr. Cowan thanked the Council for its efforts during the past year, and stated that he was especially pleased with the Evaluation conducted.

* * *

Taken from the Minutes of May 13, 1983 Annual Meeting.

Regional Reports

Central Plains

J. A. Knight

The diversion project of the Assiniboine River is imminent. The plan is to divert water from the Assiniboine River to the La Salle River and Elm River channels with pumps at various locations. This diversion will provide for farm and stock watering as well as furnish the villages of Starbuck, Sanford and La Salle with an adequate water supply. Environmental concerns in transferring water between watersheds may not be a problem, as there appears to be no adverse effects on the downstream portion of the Assiniboine River. The La Salle River will have improved water quality through increased flows which should enhance fish and wildlife production and make the river more attractive for recreational use.

The provincial Pesticide Container Disposal project seems to be effective and has generated interest in some rural municipalities. The R.M. of MacDonald has designed and built a portable can crusher. Other municipalities might be interested in this machine.

Garbage dumps and sanitary land fills are still creating problems with litter. If this garbage could be incinerated, the heat generated could be used in buildings. Another disposal method may be by converting it to soil as is being tried in Ontario.

Consideration of our soil is most important. There should be incentives so that land clearing would not be done on the steep slopes, gullies would be grassed, and field shelter belts planted to conserve moisture and control soil and snow drifting. Another benefit of field shelter belts would be to reduce the cost of snow clearance on our roadways.

* * *

Presented at December 3, 1982 Council Meeting

Interlake

Bill Aitken

The field burning of crop residues was very prevalent in the Interlake this year. In spite of repeated warnings from agriculture representatives, many farmers are reluctant to take the extra effort and time to work the residues into the soil. Much more explicit means of educating farmers about the harmful effects on the land must be carried out.

The Canadian Transport Commission held hearings regarding abandonment of the CNR

line from Grosse Isle to Fisher Branch. Alcan did not make representation to retain the line by the proposed plant site near Balmoral. Several proposals suggested that a lateral line be built from Arborg to Poplarfield and that the line from Poplarfield to Grosse Isle be abandoned.

An effective electric fence adopted from Australia shows promise of keeping sheep and wolves apart. In the past, losses were very substantial; in fact, one producer was forced to sell off his flock before it was destroyed.

A 330,000 acre tract of land north of Arborg and Riverton has been proposed as the Moose Lake Forest Reserve. Many people in the region have voiced concern about this designation and prefer the present multi-use concept.

A long overdue fish ladder is now being constructed around the Fairford River dam.

The North Dakota media tour of October 5 and 6 was very successful in that not only will North Dakota learn about Manitoba concerns regarding the Garrison Diversion, but these same reporters will report project activities with a fresh point of view. Letters will be sent to U.S. representatives in anticipation of a Garrison floor fight in Congress on or about December 4, 1982.

* * *

Presented at December 3, 1982 Council Meeting

Northern

E. B. Johanson

The Northern region has many concerns relating to the environment. This can be expected, considering the vastness of the area, its relatively small population and limited development.

Our freshwater lakes are experiencing radical changes due to Hydro developments on the Saskatchewan, Nelson, Churchill and Burntwood river systems. Changes in water levels are affecting water quality which in turn is having immediate effects on commercial fishing as well as the human populations living in the areas.

When our northern region was inhabited by only a relatively few natives, prior to the arrival of outsiders, and the main use of water was for drinking, little or no harm was done to the environment. We are now faced with the challenge of ensuring a minimum of harm will be done to the environment, while still vigorously pursuing development of the resources at hand.

The bad effects which Manitoba Forest Industries are having on a vast area of the forest is a concern often heard from people frequenting the cut-over areas. A real step forward is now being made with the commencement of a reforestation program and the building of a tree nursery at Guy Hill in Clearwater Lake Provincial Park close to The Pas. This is certainly a step in the right direction. Reforestation was one of the early demands expressed by the Norman Development Corporation some ten or twelve years ago.

Exploration for oil is again proceeding in Hudson's Bay after a lapse of some fifteen years. Concern is expressed by those people involved with our wildlife, especially polar bears and migratory birds, should there be an uncontrolled oil spill. Manitoba's vast salt water coast line and its uniqueness to our province and the heart of our North American continent is surely worthy of every environmental consideration.

The demand for more agricultural land in The Pas — Saskeram Wildlife Management Area is a source of conflict and concern among the people in the area insofar as it relates to farming or to maintaining wildlife habitat, mainly waterfowl, wild fur harvest and game management. The region has large areas of land suitable for agriculture if developed, which in turn could not be developed as marsh land. The costs of development, at present, are prohibitive but should not be lost sight of as an alternative.

Transportation of hazardous goods and the selection of hazardous waste sites, together with the storage of large amounts of highly inflammable commodities, is raising public concern. Several meetings have been held and some improvements made.

When and if Alcan should renew its interest in developing an aluminum processing plant, consideration should be given to a location that would not affect arable land and the hazards placed on large human populations. Manitoba is one-fifth arable land which can hardly class us as a prairie province. The moving of industry away from arable land and the encouraging of new industry development on other than arable land is surely a worthy concern.

* * *

Presented at December 3, 1982 Council Meeting

Application was made through the Manitoba Environmental Council for the hiring of a STEP student for 16 weeks during the summer of 1983, the project being identifying and

priorizing of environmental concerns in The Pas and area. Meredith Lamb, a member of Council, has volunteered to take charge of the project. Approval of a student at the time of writing has not been confirmed.

The Sixth Environmental Cartoon Contest was publicized throughout the schools and news media of the area.

Environmental concerns are being expressed by members of the Clearwater Lake Cottage Owners Association as they relate to Clearwater Lake Provincial Park, namely, hunting within the park, stabilization of lake levels, and the use of leaded gasoline in outboard motors.

Transportation and storage of hazardous goods and hazardous wastes through the heart of the Town of The Pas continues to be a real concern to people in residential areas adjacent to the railway and main highways and also to the local fire department and local police.

The removal of bulk storage of gas, oil, propane and chemicals to a proper industrial park would reduce to a large extent the present hazards.

The relocation of railway switching yards to an area away from the Town would reduce the hazards of switching and the layover of trains containing hazardous goods and wastes.

Suggestions are being heard that a refund price be placed on all insecticide and herbicide containers and that the responsibility for proper disposal of the used containers be placed on the users of these products. If refunds are high enough, the present situation would greatly improve with less cost to the public purse.

Through involvement in the Wildlife Advisory Planning Board of the Northern Flood Agreement, Article 17 of the Agreement is being periodically monitored.

* * *

Presented at May 13, 1983 Council Meeting

Parkland

Barry Wild

The Parkland Region hosted the first meeting of the former and newly elected directors at a lodge north of Winnipegosis on June 12 and 13. Seven directors were able to be in attendance, and in addition to normal business proceedings, the Board was advised of local concerns by the Deputy Mayor of Camperville, by a Natural Resources Officer, and by a local farmer.

Ducks Unlimited had ten projects either ongoing or commencing in the Dauphin area this year for a budgeted total expenditure exceeding $1,000,000 and an area affected somewhat over 5,000 hectares. The stated aims of much of this activity was to alleviate flooding problems and at the same time improve wildlife habitat.

Just prior to the Council's annual meeting, the Duck Bay Fish Hatchery was razed by fire, eliminating its usefulness to the area. To this time a decision has not been announced whether the hatchery will be rebuilt, once again to release each year up to 70 million pickerel fry into Lake Winnipegosis and other nearby lakes.

Early in September, the Manitoba Water Commission held well-attended hearings on the state and fate of Lake Dauphin. It would seem that the serious problems with the lake can only be remedied at very great expenditure and then may only prove to be short term solutions.

Also in September, a Treaty Indian resident from the Ebb and Flow Reserve was convicted and fined for killing game and allowing the meat to spoil, thereby proving to the court that he was not hunting for food.

The unlicensed hunting of bears in the Parkland Region is causing numerous problems to lodge owners by losing revenue which would have been derived from international hunters to a large influx of armed non-residents and the inevitable shooting of domestic cattle. From personal observation there would actually seem to be more evidence of bears in the area than in a "normal" year. There is doubt that such indiscriminate hunting is a sane wildlife management tool.

There remain considerable parcels of Crown lands in the Parkland Region, and though most may be not better than dubious in their agricultural potential, nevertheless the Department of Natural Resources has recently lifted its previously imposed moratorium on the sale to farmers of Crown lands which they lease. Though popular with farmers, this program diminishes, in perpetuity, available habitat for wildlife and seemingly fails to provide any long-term benefit to this province.

Finally, the cool summer which retarded plant development, coupled with an unseasonably severe killing frost over the whole area on the night of August 26th, wreaked havoc with Parkland agriculture. Almost every field crop suffered a loss of both yield and quality, with some areas of more susceptible crops failing entirely. There were no tomatoes in Duck River this year!

* * *

Presented at December 3, 1982 Council meeting

There seem to be no significant efforts to replant forest resources lost to fire or lumbering in the Parkland area. Since the major fires of 1980 in the Duck and Porcupine Mountains, timber cutting has continued to erode upon a steadily dwindling base. Positive actions are urgently required to reverse this trend so that wildlife and generations of Manitobans will have viable forests in the future. The only bright spot in this department is the 1983 Trees for Canada project in which Dauphin's Scouts, Cubs and Beavers were out on May 7th in their annual fund-raising and reforestation blitz.

The Department of Highways has made extensive and frequent use of salt on winter roads so that it is no longer necessary to live in a large urban centre for one's vehicle to suffer the ravages of corrosion. The motivation for this tactic seems to originate solely with an unproven connection with traction and evidently does not consider environmental consequences. A report from Ontario indicates that wildlife are attracted to drink from the briny pools, and these animals are then frequently injured or killed by passing vehicles. Also, in our climate there is no winter-long dilution of these salts, but rather their accumulation runs off all at once with the spring melt. This slug of salinity may well influence spawning runs up the creeks which carry the run-off from highway ditches.

Gasoline price wars in Metro Winnipeg have created no friends in the Parkland where prices at the pumps have remained high. Rural residents who are forced to consume petroleum fuels just to engage in their agricultural activities or to travel to town are offered no similar reductions. Regular gasoline in Winnipeg has frequently been priced lower than marked gasoline which is available in bulk to farmers.

In mid-February, a broken pipe connection caused the escape of approximately 16 t of liquid anhydrous ammonia from a storage tank which was 1 1/2 km west of Dauphin. Five farm families left their homes as a precaution, and a foul odour pervaded Dauphin to the distress of its citizens that night.

Officials with the Department of Natural Resources have reported an increase in the illegal use of snares within the Parkland this past winter. Snares set for wily coyotes and wolves often have greater success on domestic pets and livestock. Dogs have been found strangled, as have badly injured cattle with lacerated or frozen extremities.

A recent Canadian Transport Commission order has allowed Canadian National Railways to abandon the Fork River to Winnipegosis spur line as of the 14th of last month, and will result in the complete closure from Sifton to Fork River in two years' time. Seven hundred thousand dollars in scheduled maintenance and improvement for the Fork River elevator has been canceled and grain farmers will now be forced to haul their product much longer distances. This decision is detrimental to the continued viability of several rural communities. It will necessitate the consumption of larger amounts of fossil fuels and will degrade the road system. Alternate elevator storage in places such as Dauphin is already less than adequate to cope with existing grain traffic.

Public interest is very high in the prospect of amending existing statutes or regulations which purport to grant essentially unrestricted hunting rights to natives. Recent letters to the editor, reports in the media, petitions and resolutions of town and rural councils have all indicated a dissatisfaction with current legislation, or at least its interpretation. It is thought that decisive action must be instituted while sufficient breeding stocks remain to allow wild populations to continue.

A predator-discouragement program, using the sound psychological principle of taste aversion, is meeting with great success in the Parkland. Specially prepared baits laced with a lithium salt and dressed up in the fleece of a sheep or lamb have been placed on participating farms by officers of the Department of Natural Resources. Though there is no permanent injury to the predator, after up to four hours of violent vomiting, the animal apparently seeks future snacks elsewhere than from a flock of sheep.

Farmers in the Swan River area have initiated an attempt to form an organization which would have as its objective the conservation of soil on their agricultural lands.

Federal research programs, through the Freshwater Institute, will be attempting to rehabilitate Lake Dauphin with positive results anticipated within four years. Six rearing ponds, each 1 ha in size, will be constructed at Methley Beach and after basic research is completed, pickerel fry raised in those ponds will be released to reach maturity in the lake itself. Though all the lake's problems will not be solved by means of this one program, nevertheless it represents a gigantic step in the right direction and results obtained from this study should be applicable in analogous situations across the country.

* * *

Presented at May 13, 1983 Council Meeting

Pembina Valley

Betty Pawlicki

The Assiniboine South Hespeler area is, at present, the subject of a PFRA study on drought-proofing. The concept envisions a dam at Holland to retain water for eventual distribution by canal along the Pembina escarpment, ultimately to be used for farm irrigation and assuring municipal water supplies. The major centres cited in the study are Altona, Carman, Morris, Morden, and Winkler. The project envisages a high dam at Holland, a pumping station at Rathwell, and the canal.

The area tends to be in a flood-or-famine position when water supplies are considered, with the Red River in flood some years, and a lack of adequate moisture in others. The towns of Altona and Gretna at present depend upon Neche, North Dakota for potable water. Winkler depends upon an aquifer for its water supply. Depletion below a certain level leads to salinity, and in drought years water must be rationed.

The area has a large number of industries. Any water-intensive industry would have to have an assured supply of water if it were to locate here. Thousands of acres are considered to be suitable for irrigation. The study is concerned with an alternate source of water for farm use in drought years. In addition, the water diversion could contribute to improving municipal water supplies and furthering industrialization.

The Morden Museum opened this summer. It houses prehistoric marine skeletons and fossils that have been unearthed at the bentonite mines near the town. The remains are supposed to be the finest of their kind in Canada. The bentonite mining company has been very co-operative in working around remains. Bulldozer operators keep a lookout for bones, and when any are uncovered, contact the Museum Board so that they may remove any finds. The Museum Board is very grateful for the interest shown by the company and the workers.

Some area farmers are concerned about land usage. They would like to be assured that safeguards are taken to ensure conservation of the land and that with increasing air and water pollution, environmental implications are considered. Land-use policies should serve as guidelines for the effective development of a region's land resources, with care being taken to ensure future productivity. The loss of agricultural land to non-agricultural use is a major concern. Cities are encroaching on agricultural land.

Water is a very important resource to the Pembina Valley, both to the agricultural interest and the urban areas. Unfortunately, ground water supplies, except for the Winkler and Miami aquifers, are inadequate. Therefore, surface water must be utilized as the major source of supply. Drainage and destruction of head water forests have reduced snow water melt to a single flash type flood followed by eleven months of inactivity in the streams of the area. Conservation measures such as head water retention, and development of dams on natural rivers such as the Pembina, would alleviate both spring flooding and summer drought.

Public works projects such as the raising of the Morden dam by seven feet do not make any economical sense from a conservation standpoint. The same amount of money spent upstream, in a retention structure, would have afforded complete flood protection to the town of Morden, as well as the desired year-round water supply, and would even have lengthened the downstream flow of water and aided the recharge of the Winkler aquifer. Road crossings of ravines can easily incorporate retention structures without much additional cost.

The digging of drainage ditches has led during the spring to soil erosion in some years to compounding flood problems downstream. Policies established on land and water use should be in the long-term, in the interest of conservation.

* * *

Presented at December 3, 1982 Council Meeting

Winnipeg

J. F. Palamarchuk

I must confess that I previously have not devoted sufficient attention to the Winnipeg region, being preoccupied with the affairs of the Membership, Wildlife, and Land Use Committees. This appeared to be acceptable to the Executive and the Board for I was never queried on the environmental activities of the Winnipeg Region.

I did, however, become involved in the Environment Committee of the City of Winnipeg Council, and tried to effect a closer liaison with that group. I had no success. I am pleased that the City has rejoined our Council, and look forward in the future to a productive relationship with their new representative, Councillor Evelyn Reese.

There are many environmental concerns within the Winnipeg Region with which our Council could be involved. Examples that spring immediately to mind are the location of the CPR yards, the rehabilitation of the core area,

and the transportation of hazardous goods. Some have previously been tackled by our technical committees. These are the water quality of the Red River and the mosquito spraying problem. Finally, our Chairman has presented his views, which were approved by the Board, regarding Plan Winnipeg.

While the Winnipeg Region is small in extent, its problems are not diminutive. Its huge population, relatively speaking, tends to increase environmental concerns. It is a difficult task to try to provide people with the quality of life which they expect and simultaneously ensure that their wastes are removed and industries are allowed to operate adjacent to them. Faced with this dilemma, I feel that the only way I can make an impact is to bring forth those concerns which have a broad principle behind them or affect a great many people in the region. This means ignoring, to use a simile, the stop sign and concentrating on the traffic system.

The prevalence of Council members residing in the Winnipeg area is a bonus. I request that you keep my remarks in mind for the occasion when a Winnipeg Region environmental concern comes to your attention. Advise me of it, and I will see if one of our technical committees can handle it.

Mr. Chairman, you have heard of the previous inactivity of the Winnipeg Region. Hopefully that situation is at an end. With the assistance of the local members I feel that the Winnipeg Region will operate as well or better than the other regions of the Council.

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Presented at December 3, 1982 Council Meeting

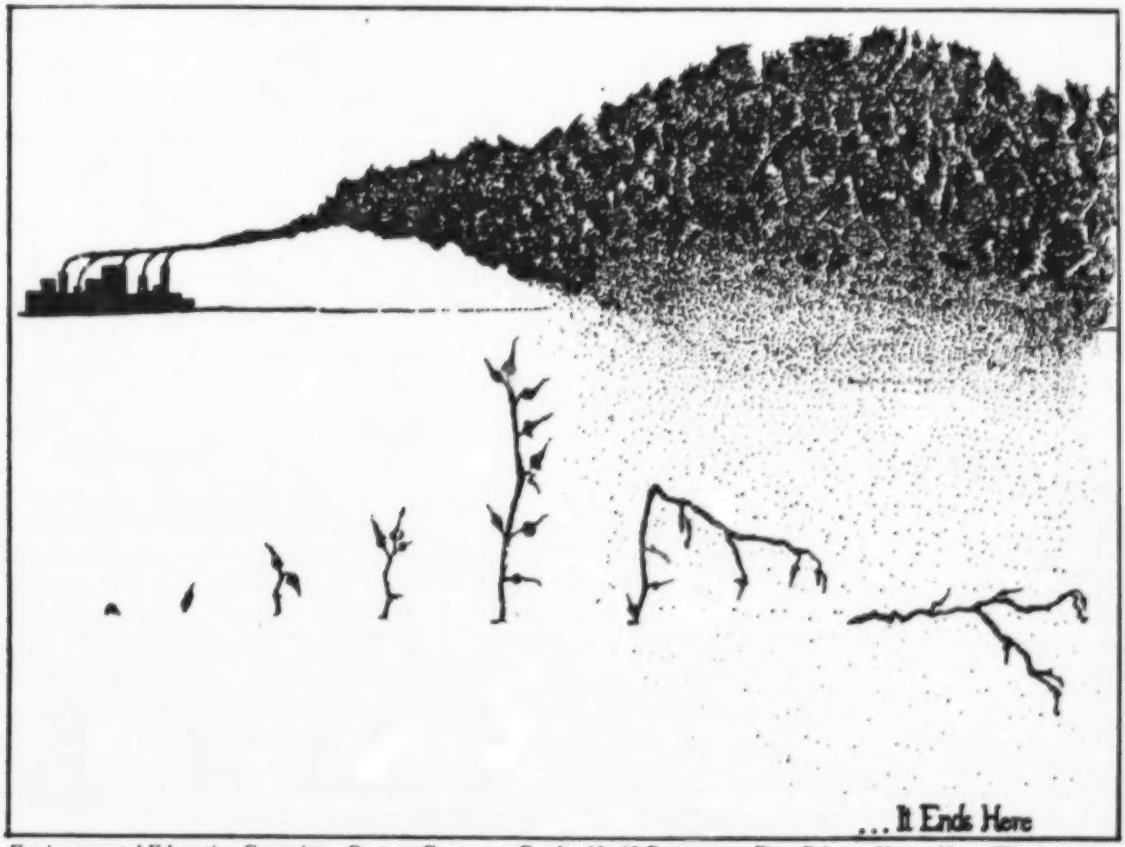
Committee Reports

Environmental Education

Ron Phillips

The Environmental Education Committee had monthly meetings from September 1982 to April 1983. The major thrusts of the work of the Committee were:

1. The joint preparation of a brief with the Environmental Chemical Committee
2. A close examination of environmental education materials from different provinces
3. An in-depth study of the environmental component in the K — 9 curriculum of the Department of Education



Environmental Education Committee Cartoon Contest — Grades 10 - 12 Category — First Prize — Nancy Ness, Winnipeg

4. Co-ordination of a cartoon contest
5. Development of three briefs for the May 13, 1983 annual meeting.

There were 1,000 entries in the cartoon contest, the largest to date. Four of the winners were from rural Manitoba, and four from Winnipeg. Presentation of the awards was scheduled to be by Governor-General Edward Schreyer during Canadian Environmental Week. The list of winners were announced as follows:

Category	First	Second
Open	Dean Tweed	Glenn Kirkup
Grades 10 - 12	Nancy Ness	Cam Munro
Grades 7 - 9	Tim Martens	Debbie Ascoli
Grades 4 - 6	Andy Jeanson	Jodie Johnson

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Presented at May 13, 1983 Council Meeting

Environmental Chemicals

D. F. Malley and D. Muir

This year, an important event has brought the on-going concerns and efforts of the Environmental Chemicals Committee (ECC) in regard to hazardous chemicals, a step closer to fruition. In 1979, this Committee drafted recommendations on collection and transport of hazardous waste chemicals (Annual Report 8, 1980, pp. 20-21) and urged that a policy be developed on management of these wastes (A.R. 8, p. 23). It also urged that the Environmental Management Division improve its emergency response capability to accidents involving hazardous chemicals (A.R. 8, p. 24). Subsequently, it recommended a program for collection and disposal of small volume hazardous wastes from schools, hospitals and laboratories (A.R. 9, 1981, pp. 26-27). Furthermore, the Committee urged minimization of hazardous wastes (fluorides and sulfur dioxide) emitted to the atmosphere in its brief on the proposed Alcan aluminum reduction plant (A.R. 9, pp. 29-33, A.R. 10, 1982, pp. 24-25) and on the smelter licence for Inco Metals Co., Thompson (A.R. 10, pp. 27-30). In March 1983, we saw the launching of an important three-step program on hazardous waste during the Manitoba Symposium on Hazardous and Special Wastes, March 16 - 18. This promises to deal with many of the concerns of ECC regarding hazardous waste in Manitoba. Several members of the ECC participated in the symposium, including Bill Turnock who served as a panel member and Barry Webster, as a workshop leader.

Most of the effort of the ECC this year was directed toward our continuing interest in insect control programs in Manitoba (cf. Brief on Mosquito Control Programs in Manitoba, Annual Report 10, pp. 30-34). In October the Clean Environment Commission (CEC) released its "Report on Mosquito Control Programs in Manitoba", based on public hearings in May 1982 in four Manitoban cities. In a letter dated December 1, the ECC responded to the request from the Minister for feedback on the CEC report. The ECC concurred with most of the 13 recommendations of the CEC Report, particularly urging amendment of the Clean Environment Act to require every municipality to obtain a permit from the Province of Manitoba before conducting a municipal mosquito control program using insecticides. The ECC recommended that adulticiding not be carried out in residential areas; that a pesticide branch be established in Manitoba, among other functions, to issue permits for municipal mosquito control programs and to license operators; that a protocol be designed to assess the effectiveness of the control program (aerial spraying with Baygon) for Western Equine Encephalitis and that public education on nuisance mosquito control be increased. On January 19, five ECC members appeared as a delegation before the City of Winnipeg Council, prior to its vote on the recommendation of the City's Executive Policy Committee regarding the CEC Report on mosquito control in Manitoba. Barry Webster read our brief which recommended that fogging not be carried out in residential areas because of its temporary nature, that larviciding be the primary form of mosquito control, that public education about alternative methods of control be increased and that the effectiveness of mosquito control programs be well-monitored and reported in a timely fashion. On February 9, Dr. Roy Ellis, City Entomologist, presented a highly informative slide talk to ECC on mosquito control programs in Winnipeg. Two briefs presented here today again carry our recommendations to the Minister for more education on nuisance mosquito control. A third brief formalizes our recommendation for the establishment of a Pesticide Control Branch in Manitoba.

From the summer student project in 1982, "Monitoring for Environmental Contaminants in Manitoba", it became clear that ground water in the province is infrequently monitored for chemical contaminants other than nitrate. This Committee developed a joint brief with the Water and Waste Committee for the fall meeting urging more study of regional groundwater flow and monitoring the groundwater quality.

Additional activities of ECC were in several other areas. The two co-chairs of this Committee served on an ad hoc committee of Council to review the proposal to establish a provincial Department of Environment. ECC was asked to respond to a proposal by a chemical disposal

firm to test a PCB Mobile Diesel System in Manitoba. The ECC received a copy of Order No. 960 of the CEC dated September 20, 1982 with regard to the development of an open pit mine by Inco Metals Inc. at Thompson Lake. In a letter dated January 3, the CEC was advised of a technical error in the Order and in federal regulations and guidelines used in the development of the Order. The Order required the arithmetic averaging of pH values, which are a logarithmic representation of acidity.

This Committee met five times during the year. We thank the numerous members of ECC who have actively participated and assisted in making this a very productive year for this Committee.

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Presented at May 13, 1983 Council Meeting.

Membership

F. J. Humphries

I would first like to acknowledge the fine work done by the previous Membership Chairman, Mr. Jack Palamarchuk. He served as Membership Chairman for five years, up until September of this year, in addition to being Interlake Regional Chairman, an active member of various technical committees, and now Winnipeg Regional Chairman. I think that we owe Jack a hearty vote of thanks for his continuing strong support of Council.

Your Membership Committee now consists of three people: our Executive Secretary, Mr. Jim Keleher, Mrs. Olga Weber, and I am the third member of that Committee.

Next, it is with deep regret that I ask you to pause for a moment to acknowledge the passing of two Council members this past summer. Mr. H. A. H. Wallace was a Charter Member of the Council and a very active member throughout his many years with us. In fact, he served as the first Membership Chairman covering a five-year term from 1972 to 1977. He was also active on a number of the technical committees. Mr. E. Lovelace joined the Council in 1978 as a representative of the Manitoba Nursery and Landscape Association. He served as a member of the Environmental Chemicals Committee.

Since our annual meeting in May of this year we have had 14 new appointments to Council:

Mr. Austman, Altona
Dr. Alice M. E. Cheatley, Winnipeg
Mr. Stephen J. Copen, Winnipeg
Mr. Kenneth E. Emberly, Winnipeg
Mr. John G. Fortier, Winnipeg
Mr. Stephen Hladkyj, Winnipeg
Mr. Alan T. Howard, Pine River
Mr. Laverne Jaeb, The Pas
Mr. George P. Penner, Steinbach
Mr. Russ Phillips, Dauphin
Councillor Evelyn Reese, Winnipeg
Mr. Jim Shiells, Winnipeg
Mr. Horst Sommerfeld, Winnipeg
Mr. Ron Strynadka, Thompson

A hearty welcome to all of you. We hope that you find this first Council meeting stimulating and that you spend many active years with us.

Two of our new members represent organizations: Councillor Reese represents the City of Winnipeg Council, and Mr. George Penner represents the Manitoba Real Estate Association.

With the appointment of three new members we now have a membership of 91, excluding three organizations who have not yet appointed their representatives, or a total of 94 when these appointments are made. Of these, 31% represent rural areas of the province. Our rural membership has continued to increase the last two years. In 1980, only 25% of Council membership was from outside the city of Winnipeg.

With respect to organizational membership in Council, we face a periodic problem of organizations failing to appoint replacement members within a reasonable time frame after notification by Council. The Membership Committee suggests that organizations be allowed three months after receiving written notification to nominate a replacement member for an inactive or resigning representative. If the organization fails to meet this time limit, the Board will reconsider the membership and may at that time recommend to the Minister that the organization's membership be terminated.

Mr. Chairman, if it is in order that I present this as a motion at this meeting, I would like to do so. We would like to keep an active membership and need the means to weed out in a reasonable length of time those organizations that no longer wish to participate in Council business.

Finally, I would like to point out to you that your membership lists are now being prepared by word processor which gives us much greater flexibility for updating, and even gives us lists of technical committees.

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Presented at December 3, 1982 Council Meeting

Since our last meeting, the Board has recommended to the Minister the appointment of the following new members;

Mr. Don Glays, Winnipeg
Mr. J. Michael McKernan, Winnipeg
Ms. Meredith Lamb, The Pas
Mrs. Donna Sproule, Winnipeg
Mr. Murray Wagner, Treaty and Aboriginal Rights Research Centre of Man. Inc.

We also have two organizations represented by new members, and these are:

The Entomological Society of Manitoba, Margaret Friesen
The Manitoba Association of Urban Municipalities, Alice Balsille

We welcome you and trust that you will find your association with the Council rewarding and useful to your organizations.

We have also received an application for membership from Mr. Harold A. Laine, who is Vice-President of Inco Limited's Manitoba Division. Due to staffing problems, approval of this membership application has been delayed, but we have invited Mr. Laine to attend our meeting today as a guest.

Your Membership Committee has been wrestling with the problem of non-active members at its recent meetings. We have recommended to the Board that they address this problem and attempt to come up with a program that will ensure good attendance at all of our meetings, both Technical, Annual and Semi-Annual meetings. I am sure that you are all aware of this problem which exists for many organizations today. We urge you to submit any ideas which you have to the Council Executive.

I wish to acknowledge the continuing support of our two other Membership Committee members, Mrs. Mary Scoates and Mrs. Olga Weber.

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Presented at May 13, 1983 Council Meeting

Land Use

Rod Fowler

In 1982-83, the Land Use Committee focused its efforts on two main issues:

1. Provincial Land Use Policies
   Your Committee's work on this issue has resulted in the preparation of a brief (Brief #10) which will be presented separately.

2. Land Use Changes and the Impact of Runoff.
   During 1981 and 1982, a geography student at the University of Winnipeg had been carrying out research on this problem on the Boyne River watershed. The preliminary information was reviewed with the Land Use Committee; however, regrettably the final report has not yet been completed. His preliminary findings indicate a correlation between land use changes and runoff, which is consistent with the results of similar studies in the U.S. and Canada. This problem is a major concern in many parts of Manitoba where severe spring flooding is a common occurrence. Unfortunately, with the exception of certain programs along the Riding Mountain escarpment, very little is being done in Manitoba to correct the problems.

The Committee also discussed other issues such as the sale of Crown lands, solid waste disposal sites, the proposed Water Management Plan, and the agricultural use of abandoned or undeveloped municipal rights-of-way. This latter issue deserves further comment.

At the present time, there are thousands of acres of unused road allowances in southern Manitoba which are being utilized by adjacent farmers for their agricultural operation at no cost to them. Each mile of unused road allowance could provide 12 acres of valuable wildlife habitat, as well as reducing water and wind erosion and thereby providing benefits to all citizens of the municipality or the province. I am pleased to report that several wildlife associations in southern Manitoba are presently working with their municipalities to have these unused road allowances set aside for wildlife.

In closing, I would be very remiss if I did not thank all the members of the Committee for their time and valuable input during this last year.

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Presented at May 13, 1983 Council Meeting

Publications

Gunter A. Schoch

During the past twelve months, your Publications Committee has been extremely active, which is evident by the fact that a total of 21 meetings were conducted. While the entire Committee met at four occasions, there were also four meetings of sub-committees for the purpose of reviewing the suitability of submitted manuscripts for publication. In addition, thirteen meetings took place, attended by the Chairman and the Executive Secretary, who also functioned as Editor-in-Chief for all Council publications.

I am pleased to report that as a result of these activities, we were able to achieve our primary objective, a substantial catch-up in the backlog of publications. As many as four publcations have been issued since the last annual meeting, which are listed as follows:

1. July 14, 1982	Annual Report 9 Cost: $4,617
2. November 6, 1982	Topics 1 on "Environmental Quality Preferences" Cost: $783
3. December 6, 1982	Study 15 on "Tenth Anniversary Celebrations" Cost: $2,074.15
4. April 6, 1983	Annual Report 10 Cost: approx. $1,600

You will notice from the aforementioned typesetting and printing costs that a very substantial saving has been achieved in the production of Annual Report 10, in comparison to the previous one, although its high quality and professional appearance have been maintained, if not improved. It was probably the most laborious and time-consuming publication ever issued by the Council, primarily due to changes in government regulations for the production of annual reports, which became effective after Annual Report 10 had already been submitted to the Queen's Printer last October. This resulted in numerous meetings, reviews, revisions, and mounds of red tape, as well as five months of delay. Fortunately, these extra efforts were not in vain, as the end product is not only of high standard, but also surprisingly attractive financially.

Other publications now in preparation and expected to be printed in the current fiscal year are:

- Topics 2 on "Crown Land Designations" by Anna Polonyi, a 1982 STEP Student supervised by Professor Nickels. The second word-processed draft of this manuscript is now in the final revision stage.
- Under consideration as Topics 3 is a manuscript on "Wildlife Legislations" by Michael Thornton, another 1982 STEP Student also supervised by Professor Nickels.
- Study 16 on "South Indian Lake" by D. Hatch with text ready for typesetting, while some illustrations are still to be selected.
- Study 17 on "Red River Flooding" by Professor Rotoff, with text 50% completed.
- Annual Report 11 for the 1982-83 business year, which will include the proceedings of this annual meeting.

During the past year, your Publications Committee has also dealt with three other important matters:

- A definite procedure has been developed and applied concerning the review of submitted manuscripts, to judge their suitability as Council publications. This is now carried out by a sub-committee appointed for each manuscript review, consisting of 2 - 3 members and 1 - 2 specialist referees. In the event the decision of the sub-committee is appealed, the entire Publications Committee will function as a review committee to reach a final decision in the matter. This procedure was approved by the Board of Directors at its meeting held March 2, 1983.
- The development of a Council Manual, by the Executive Secretary, providing operational and procedural guidelines for Council and its committees, was proposed and subsequently approved in principle by the Board of Directors at its meeting held March 2, 1983. Its first phase, the preparation of a table of contents, was scheduled for completion by September 1983, followed by a step-by-step approach for the completion of each section.
- An in-depth review and update of the publications distribution list is being undertaken by your Committee, especially in regard to universities and government environmental agencies located in neighbouring provinces and states. This will generate a wider distribution of future Council publications to appropriate recipients.

In retrospect, it has been a busy but successful year for your Publications Committee, where much has been accomplished, due to the outstanding work and co-operation of the Committee members. I would like to extend my sincere thanks and appreciation to Miss Cho, Professor Dore, Mr. Timothy Fultz, Mrs. Gwen Parker, but foremost and especially to Mr. J. J. Keleher, whose highly commendable efforts have made it possible to reach our goals for the 1982-83 year of operation.

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Presented at May 13, 1983 Council Meeting

Nominating Committee

Basil M. Rotoff

The Nominating Committee, consisting of Messrs. Wm. Turnock, D. Punter and Prof. B. Rotoff, and having met and communicated by telephone on a number of occasions, submits the following slate of Officers for the Board of Directors:

Chairman	Dr. A. C. Maniar
Vice-Chair	Dr. D. F. Malley
Secretary	M. Friesen
Publications	G. Schoch

For the Regional Committees, the Committee submits the following slate of Chairmen:

East Man	R. Dale
Central Plains	J. Knight
Interlake	B. Aitken
Northern	E. Johanson
Parklands	B. Wild
Pembina Valley	D. S. Schellenberg
West Man	A. Howard
Winnipeg	B. Pawlicki

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Presented at May 13, 1983 Council Meeting

Wildlife

Jim Nickels

During 1982-83 the Wildlife Committee held six meetings. Topics discussed ranged from the use of wild animals as pets to the preservation of wildlife habitat and the protection of wild animals. Members of the Committee attending meetings during the year were J. Nickels (Chair), C. Bennett, R. Corobow, S. Hladkyj, J. Maurer, W. Pruitt, D. Punter, J. Robertson, I. Rollo, E. Sheremeta and L. Stephen. B. Wild participated in committee activities as a guest. During 1982-83 the use of wild animals as pets became a concern, especially in terms of possible laws restricting pet stores and animal ownership. The use of the Dingo fence to keep wolves away from cattle was also discussed. A continued concern from previous years was the abuse of trapping in the province. Also of continued concern were the issues of

a) The economics of wildlife utilization
b) the impact of the oil pipeline
c) the impact of the powerline from the Nelson River to eastern Manitoba
d) the impact of road expansion into wilderness areas
e) commercial fishing
f) Manitoba park expansion plans

New issues included the release of a trapped coyote by the Wildlife Branch; poaching near Camperville; wild rice leases; water levels and watershed problems; and destruction of snapping turtle populations.

Bennett, Maurer and Nickels attended a conference at the University of Manitoba on the rights of animals, and gave a summary report to the Wildlife Committee. Sheremeta attended the Whiteshell Park Plan meeting held in the Art Gallery Auditorium and also gave a summary report to the Committee. Three papers summarizing summer work through the STEP Program were completed and submitted to the Publications Committee. Anna Polanyi wrote a report titled "The Use and Misuse of Crown Lands for Wildlife Purposes"; Mike Thornton wrote a report titled "Endangered Species and Protective Legislation". Pat Martin wrote an interim report titled "Rehabilitation of Wildlife Habitat after Wildfire". The supervisors of the summer projects were Nickels, Nickels and Pruitt, respectively.

The major work of the Wildlife Committee during 1982-83 focused on

a) changing the laws on the hunting of timber wolves
b) taking steps to stop illegal hunting
c) attempting to resolve the disparity between native and non-native hunting regulations
d) reconsidering the current noxious weeds legislation.

The first issue resulted in the Committee's support of a resolution presented to the Manitoba Naturalists Society by R. N. Waldon. All issues resulted in briefs presented to Council.

The year represented a transfer-point as J. Nickels resigned as Chair at the end of the 1982-83 period, and J. Maurer took over as next year's Chair. The year was an effortful one, and in terms of the native/non-native hunting issue, a controversial one. Thanks are extended by the outgoing Chair to all those who participated so actively in the valuable work of the Wildlife Committee.

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Presented at May 13, 1983 Council Meeting

Revised Bylaws

The bylaws of the Manitoba Environmental Council were revised at the Council Meeting of December 3, 1982:

Article I — Name

1. The name of this Council shall be the Manitoba Environmental Council, hereinafter referred to as the **Council**.

Article II — Object

1. The object of Council shall be to act as an advisory body to the member of the Executive Council charged by the Lieutenant-Governor in Council with the administration of the Clean Environment Act, hereinafter referred to as the **Minister** for the following purposes: to identify, collect and analyze information on environmental problems; to discuss environmental priorities; and to transmit the results of its activities to the Minister and the public and for the above purposes to initiate and take such action as may be appropriate.

Article III — Minister's Responsibility

1. The Minister shall provide to the Council, usually through his (words importing male persons include female persons) Department:
   i. Finances to adequately provide for Council Activities;
   ii. The services of an Administrative Officer;
   iii. Departmental administrative services, secretarial services and office facilities;
   iv. Services of Departmental personnel as required to facilitate Council activities;
   v. Information as required to facilitate Council activities;
   vi. Other services as may be required which are approved by the Minister.

Article IV — Membership

1. Honourary members shall be
   1. The incumbents of the following positions in the Department: Minister, Deputy Minister and Assistant Deputy Minister responsible for environmental management.
   ii. A Parliamentarian, who shall be appointed by the Minister, upon the recommendation of the Council's Board of Directors, hereinafter referred to as the **Board**.
   iii. Any other persons appointed by the Minister, on the recommendation of the Board.
2. Regular members, hereinafter referred to as **members**, shall
   i. Be residents of Manitoba appointed by the Minister, on the recommendation of the Board but no employee of the Department shall be appointed;
   ii. Be appointed for a two-year term and may be reappointed;
   iii. Submit their resignations in writing to the Minister;
   iv. Represent themselves or an organization;
   v. Be expected to participate in Council's activities;
   vi. Not exceed one hundred (100), exclusive of those who have been granted a leave of absence by the Minister;
   vii. Numerically be in proportion, insofar as practical, to the population of the Council regions which they represent.
3. Any group having the following criteria may be considered as an organization for representation on the Council. These criteria apply after April 27, 1979:
   i. Be operating in the Province of Manitoba;
   ii. Have a membership representing more than 25 persons;
   iii. Have members eighteen (18) years or older;
   iv. Have regularly elected officers;
   v. Must participate in activities of Council through its representative;
   vi. Representative must report to his organization on activities of Council.
4. Each organization shall be represented by only one member. With the exception of organizations represented on the Council as of December 1, 1978, constituent bodies of an organization shall be regarded as identical to that organization. The number of members representing organizations shall not exceed fifty (50) per cent of the total number of allowable members.
5. Any conduct on the part of an honourary or regular member(s) likely to endanger the welfare, interest or character of the Council shall be investigated by the Board. The

Board shall, by a two-thirds vote, recommend to the Council whether the member(s) shall be exonerated, reprimanded, suspended or expelled. The Council shall recommend, by a two-thirds vote, to the Minister that he exonerate, reprimand, suspend or expel the member(s).

Article V — Regional Organization

1. Membership shall be decentralized on regional basis to ensure that the Council reflects the environmental concerns of all Manitobans, has an overview of the environmental priorities of each region, and carries out regional activities.

2. Members shall be assigned to the Council regions in which their residence is located or of their choice.

Article VI — Council Meetings

1. Meetings shall be at the call of the Board. There shall be at least two (2) meetings a year, one of which shall be the annual meeting. The annual meeting shall be the spring meeting.

2. Notice of meetings shall be mailed by the Administrative Officer at least two (2) weeks in advance.

3. A quorum shall be twenty (20) per cent of the regular members, exclusive of those on leave of absence.

Article VII — Officers

1. The Chairman shall

   i. Represent the Council to the Minister and the public;

   ii. Preside at the meetings of Council, Board or Executive Committee;

   iii. Have general supervision of all Council activities;

   iv. Be an ex-officio member of all committees except the Nominating Committee;

   v. Report to the Council at its meetings.

2. The Vice-Chairman shall

   i. Preside at meetings of Council, Board or Executive Committee in the absence of or at the request of the Chairman;

   ii. Encourage and assist technical committees in organizing their activities and co-ordinate those activities which affect more than one committee;

   iii. Become Acting Chairman in the event of the Chairman's inability to act.

3. The Secretary shall

   i. Keep the minutes of all meetings of Council, Board or Executive Committee.

4. The Past-Chairman shall

   i. Be responsible for adopted Council briefs or resolutions.

5. The Administrative Officer shall

   i. Be appointed by the Minister with the approval of the Board;

   ii. Be responsible to the Chairman for Council activities;

   iii. Have no voting rights.

6. Regional and Technical Committee Chairmen shall

   i. Have minutes of meetings recorded;

   ii. Co-ordinate Committee activities;

   iii. Be empowered to appoint technical advisors;

   iv. Report to the Board of Directors.

7. Other Duties

   i. Officers shall perform such other duties as determined from time to time by the Board.

8. Election, Appointment and Vacancies

   i. The Chairman, Vice-Chairman, Secretary and Regional Committee Chairmen shall be elected at the Annual Meeting and each shall serve for one year or until his successor is elected. The Chairman, Vice-Chairman and Secretary shall not be eligible to serve more than two (2) consecutive terms in the same office.

   ii. Standing Committee Chairmen, except the Regional and Nominating Committee Chairmen shall be appointed by the Executive Committee and each shall serve for one year or until his successor is appointed.

   iii. The Nominating Committee shall be appointed by the Board.

   iv. The Vice-Chairman becomes the Chairman for the remainder of the term upon the Chairman's resignation.

   v. Vacancies in the office of

      a) Vice-Chairman or Secretary shall be filled by the Board;

b) Standing Committee Chairmen shall be filled by the Executive Committee;

c) The Administrative Officer shall be filled by the Minister with the approval of the Board.

Article VIII — Boards and Committees

1. The Board of Directors shall

   i. Be composed of the Chairman, Vice-Chairman, Secretary, Past-Chairman, Membership, Publications, Regional and Technical Committee Chairmen;

   ii. Have full power and authority over Council affairs including

      a) establishing priorities for action;

      b) making recommendations to the Minister;

      c) acting upon the recommendations of the Membership Committee, recommend to the Minister prospective persons and organizations for membership and terminations from or appointments to Council.

   iii. Appoint ad hoc committees as required;

   iv. Meet at the call of the Chairman or upon the request of three (3) Board members, with a minimum of four (4) meetings a year;

   v. Have a quorum when five (5) members are present, one of whom shall be a member of the Executive.

2. The Executive Committee shall

   i. Be composed of the Chairman, Vice-Chairman and Secretary;

   ii. Carry out duties assigned by these Bylaws or by the Board or such other duties as are necessarily required to be performed between Board meetings;

   iii. Conduct business by mail or telephone if deemed necessary.

   iv. Have its actions ratified by the Board unless they were relevant to the duties as specified by the Bylaws;

   v. Meet at the call of the Chairman;

   vi. Have a quorum when a majority of its members consider its business.

3. Standing Committees shall be

   i. The Membership Committee

   ii. The Publications Committee

   iii. The Regional Committees

   iv. The Technical Committees

   v. The Nominating Committee

4. The Membership Committee shall

   i. Be composed of at least three (3) members appointed by the Executive Committee but not more than one member may be a member of the Board;

   ii. Serve for a term of one year and may be reappointed;

   iii. Recommend to the Board

      a) prospective persons or organizations for Council membership;

      b) the names of those members or organizations who should be reappointed or who no longer qualify for membership;

   iv. Only become involved in the selection of a prospective organizational representative on the Council in order to ensure that the person meets the requirements for membership.

   v. Have a quorum when a majority of its members are present.

5. The Publications Committee shall

   i. Be composed of at least three (3) members appointed by the Executive Committee;

   ii. Serve for a term of one year and may be reappointed;

   iii. Recommend to the Board the format of each publication series;

   iv. Review the Annual Report for publication;

   v. Approve for the "Study" or "Topics" series original material or material published elsewhere;

   vi. Establish and issue standards and instructions to facilitate its work;

   vii. Approve, periodically, categories or lists of recipients of publications for educational or reference purposes;

   viii. Have a quorum when a majority of its members are present.

6. The Regional Committees shall

   i. Be composed of those members assigned to the region;

   ii. Become operative upon the election of its chairman;

iii. Identify environmental concerns and problems that affect its region;

iv. Ascertain and receive regional environmental complaints and grievances;

v. Arrange for regional activities including informational seminars;

vi. Have a quorum when ten (10) per cent of its regional members but not less than two (2) are present.

7. The Technical Committees shall

i. Be composed of all members who wish to participate;

ii. Become operative upon the appointment of its Chairman;

iii. Be created, combined or dissolved as required by the Board;

iv. Be listed, with its terms of reference, in the Standing Rules;

v. Have a quorum when three (3) members consider its business.

8. The Nominating Committee shall

i. Be composed of three (3) members, appointed by the Board at least one month in advance of the Annual Meeting but not more than one member may be a member of the Board;

ii. Nominate candidates for the offices of Chairman, Vice-Chairman, Secretary and Regional Chairman;

iii. Submit its slate of nominated candidates to the Administrative Officer, with a copy to the Chairman, 30 days before the business portion of the Annual Meeting. This slate shall be sent by the Administrative Officer to all regular members 14 days prior to the said meeting. Furthermore, all members shall be invited to make additional nominations, in writing, to be received by the Administrative Officer no later than 48 hours prior to the commencement of said meeting, specifying that the consent of the candidate has been obtained and the name of the seconder.

iv. Have a quorum when a majority of its members are present.

Article IX — Technical Advisors

1. Technical Advisors shall be particular persons recruited by a Committee from outside the Council to provide information or advice on priorities, projects and subjects.

Article X — Reports and Minutes

1. Reports, minutes and correspondence of Council shall be made available by the Administrative Officer to the public upon written request, provided that consent of any person or organization mentioned therein is given.

2. Minutes of all committees will be circulated to the regular members of those committees. They will also be available to other persons at the Council Office or through the mail, upon written request, with the consent of the Chairman of Council.

Article XI — Amendments

1. These Bylaws may be amended by a two-thirds vote of members present and voting at a Council meeting, provided that proposed amendments are mailed to members prior to the meeting.

2. The Standing Rules may be amended by the Council at any of its meetings by a two-thirds vote of members present and voting or by a majority vote with notice.

3. The Standing Rules may be amended by the Board with a two-thirds vote of members present and voting but such amendments shall have force and effect only until the next meeting of the Council unless approved at that meeting.

Article XII — Parliamentary Authority

1. The rules contained in the current edition of "Robert's Rules of Order Newly Revised" shall govern Council in all cases to which they are applicable and in which they are not inconsistent with the Council Bylaws or Standing Rules.

Standing Rules

1. The order of business for Council, Board or Committee meetings shall be at the discretion of its chairman.

2. The geographical boundaries of Council regions shall be identical with the boundaries of the Manitoba Regional Development Corporation's regions.

3. With regard to organizational representatives to Council, the need for geographical representation should be considered by the organization.

4. Members who represent organizations are encouraged, where appropriate, to inform the Administrative Officer of their organization's activities relevant to environmental matters.

5. Council's fiscal year shall coincide with that of the Department.

6. Expense claims shall be in accordance with rates provided for Manitoba government employees. Honourary and regular members residing within the perimeter highway surrounding Winnipeg shall not receive travelling expenses for Council activities occurring within the city of Winnipeg.

7. Authority for Council expenditures shall be vested respectively in the Chairman, if available; if not, Vice-Chairman; if neither, Secretary, except for those within the Administrative Officer's limit of financial authority.

8. The Administrative Officer's limit of financial authority shall be determined by the Board.

9. The Administrative Officer's title shall be determined, from time to time, by the Board.

10. Briefs and resolutions

    i. received 15 days prior to a Council meeting shall be considered at that meeting;

    ii. received less than 15 days prior to a Council meeting may be considered at that meeting if a majority of the members wish to do so;

    iii. sponsored by individuals, even if adopted at a Council meeting, will be referred to an appropriate committee for action.

11. Council business meetings are open to the public who may participate but shall not make motions or vote; they may present their environmental concerns under **New Business** but such presentations shall be subject to time being available. These concerns may be referred to a technical committee. The Chairman shall inform the public of these rules.

12. The news media are encouraged to attend Council business meetings as observers and may be advised in advance of briefs to be presented. The Chairman is responsible for regulating their activities so as not to interfere with the meeting. A table should be provided for their use.

13. The names and terms of reference of the Technical Committees shall be

    i. Energy

        a) To explore energy policies which would ensure a minimum of adverse environmental and social effects;

        b) To monitor, research and inform the public on current energy issues which will have environmental implications;

        c) To examine aspects of energy conservation which could be implemented by Manitobans, to inform Manitobans about energy conservation.

    ii. Environmental Chemicals

        a) To evaluate ways in which chemicals are used in or inadvertently discharged into the environment;

        b) To recommend appropriate changes and safeguards in registration and control legislation and procedures.

    iii. Environmental Education

        a) To seek out and monitor programs of environmental education in Manitoba and elsewhere;

        b) To promote the introduction of the best available courses in environmental education in Manitoba schools and teacher training programs;

        c) To encourage inservice training relating to such courses.

    iv. Environmental Impact Review

        a) To identify industrial, commercial, and governmental projects which may have a significant impact on the physical, biological, and resource aspects of the natural and man-made environment;

        b) To evaluate environmental impact statements on such projects;

        c) To evaluate environmental legislation and regulations.

    v. Land Use

        a) To monitor the implementation of existing land use policies and regulations;

        b) To recommend means by which land use policy and practice may be improved.

    vi. Solid Waste

        a) To examine the capacity and effectiveness of present waste disposal techniques and facilities;

        b) Determine future needs.

vii. Water

a) To examine the use of water resources, the state of water quality, and the effectiveness of legislation dealing with water;

b) To recommend policies and control measures which will facilitate the conservation and beneficial use of water resources.

viii. Wildlife

a) To assess the quality of wildlife and wildlife habitat;

b) To evaluate policies and legislation relating to wildlife and wildlife habitat;

c) To make recommendations under the Council's "A Wildlife Philosophy for Manitoba".

* * *

This revision includes amendments made at the Council Meeting of December 3, 1982.

Executive Secretary's Report

J. J. Keleher

A few years ago I used to attend the annual meetings of the Manitoba Wildlife Federation. They then were held in the early spring at Clear Lake. I won't describe the after-hours meetings in the Labatt's cabin, but want to mention the business sessions. Since I was there representing the Fisheries Branch of the Manitoba Government, I impatiently awaited the fisheries portion of the program. At several meetings I thought that too much was made over memberships — how many clubs exceeded their previous total of members, etc. This to me was superfluous. How wrong was I.

Now I realize that membership is the most important factor in the Wildlife Federation, for without members it will soon perish through a lack of finances. A similar situation applies to the Manitoba Environmental Council.

This is the reason for my choice of today's topic — "Environmental Participation". Without a participating membership, the Council will eventually cease to exist. That would be a shame, for it represents one of the few public participatory bodies in the province. A voice for the environment must be maintained.

Fortuitously, the founders of the Council realized that members should participate. They thought so strongly about this that it was included in the bylaws: "Regular members, hereinafter referred to as 'members' shall . . . be expected to participate in Council activities".

The only shortfall was that this qualitative statement was never quantified. Participation has never been defined. It should be. The previous Membership Committee discussed this subject without reaching a conclusion. One member asked another how much she was expected to participate. The second member replied that she had been informed that it was "as little as you want" — what an easy commitment to make. Allow me to temporarily drop this consideration of participation to consider the activities of the Council.

The most prevalent activity of the Council is meetings. Taking the whole year into consideration, they are numerous. During the 1981-82 Council year, there were 78. The Board met 7 times, the Membership Committee met 9 times and so on. This is a convenient place to explicitly exclude the Executive and other Board members from any lack of participation. My target lies elsewhere. So, assuming an average length of 2 hours, the Council and its committees spent a total of 156 hours, or 20 man-days in meetings. This represents considerable effort. However, meetings are not important per se, only being a means to an end.

The prime function of this Council, in my view, is to provide briefs supplying advice to the Minister. Unless this activity is fulfilled, the Council is failing in its mandate. Today's meeting started at 9:30 a.m. and hopefully will terminate at 3:30 p.m. During this period we will consider only one brief. The inescapable conclusion is that it will be a sparse meeting. What is the cause?

Looking back to the fall, the year began with the All Technical Committees meeting on September 15. The attendance there was 21. Some committees had two members present — the chairman and one other. Admittedly attendance of non-Winnipeg members was not expected. Subtracting them from the total membership leaves a total of 69, therefore an attendance of 30%. Perhaps this could be the reason for the single brief at the fall meeting.

My thesis is that the degree of participation of members determines the quantity and quality of briefs submitted to the Minister. I am mindful that some briefs are the work of individuals — recent examples are Barry Wild's brief on a Lake Manitoba Narrows Park and Ruth Corobow's brief on recycled stationery.

Others rely heavily upon the input of one person. Nevertheless, a committee of one usually does not achieve much. When it consists of many members, they act in a catalytic fashion, usually with a positive result. Participation of all Council members is invaluable in the preparation of briefs by our technical committees.

Some members have expressed reluctance to serve on a particular technical committee because they feel the lack of a technical background. I believe, and have told them so, that this is an incorrect view. They are needed on the committee to keep the "experts" in line. Frequently, the experts have a narrow view and the opinions of a layman can provide a balance.

Another fallacy among some members is that their attendance is required only for the Council meetings which, as you all realize, are only two per year. Doubtless the two Council meetings are important events, but they represent the culmination, not the sole essence of the Council activities. Other examples of non-participation of members could be provided such as the inadequate staffing of our display at Environment Week last year, but why belabour the point?

All members are needed to participate throughout the Council year to ensure a successful program. The Executive and Board can only exert themselves so much. It is preferable for the members themselves to be enthusiastic and thereby stimulate the committee chairman into activity. Incidentally, it would be most gratifying if more members would advise of their inability to attend a meeting by sending their "regrets".

To summarize, the viability of the Council depends upon the participation of all members. Individual chairmen of committees need members to function effectively. The objective of participation is advice to the Minister, not meetings. The Council could stand more "environmental participation". The members will feel better and the Council will benefit.

* * *

Presented at December 3, 1982 Council Meeting

Briefs

Monitoring Ground Water in Manitoba for Environmental Contaminants

Recommendation

The Manitoba Environmental Council recommends to the Minister that the Government of Manitoba increase its efforts to document regional ground water flows to monitor the quality of ground water to serve the following purposes:

a) to identify susceptible aquifers which are especially prone to contamination because chemicals are used in their recharge areas;

b) to ensure that landfills and holding or storage facilities for hazardous industrial or domestic waste will be sited so as to avoid contamination of aquifers;

c) to provide background data on the inorganic and organic chemical composition of various aquifers, and seasonal and annual variability in chemical composition against which to detect the appearance of, or small incremental changes in amounts of, contaminants;

d) to detect any aquifers presently contaminated which may pose present or potential hazards to human health or welfare of livestock;

e) to ensure that the quality of ground water is not adversely affected by irrigation-based agriculture and associated increased use of fertilizers and pesticides;

f) to provide sufficient knowledge of the quantity and quality of ground water resources in Manitoba to permit detection of contamination or draw-down should they occur from activities in other provinces or in the United States.

Background

Ground water is an extremely important component of our domestic, industrial and agricultural water supplies even in areas where surface water is abundant. Overall, it is estimated that about 30 times as much water is stored underground as is present on the surface at any one time. Considerable effort is made to monitor and control the quality of surface water. In comparison, ground water contamination can pose a much more serious problem than surface water contamination. Ground water contamination is difficult to detect, requiring the drilling and sampling of many

wells. Because ground water cannot be flushed, contamination of it is almost impossible to correct. Ground water contamination can affect the health of populations and livestock using the resources since the water is generally used without treatment.

Ground water pollution can occur from several sources — industrial, such as leaching from waste disposal areas; domestic, such as leaching from sanitary landfills or accidental breakage of septic tanks; and agricultural, by leaching of fertilizers, salts, pesticides, especially from irrigated land.

References

T. Y. Canby, "Our Most Precious Resource: Water," *National Geographic* (August 1980), 144-179.

J. J. Fried, "Ground Water Pollution: Theory, Methodology, Modelling and Practical Rules," *Developments in Water Science* 4 (Amsterdam: Elsevier Scientific Publishing Company), 1-330.

D. K. Todd, *Ground Water Hydrology* (London: John Wiley & Sons, Inc., 1959).

Environmental Chemicals Committee
D. Malley & D. Muir, Co-Chairs

Water and Waste Committee
S. Bayley, Chair

* * *

Approved at December 3, 1982 Council Meeting

The following Briefs were presented and approved at the May 13, 1983 meeting of the Manitoba Environmental Council.

Brief #1: Curriculum on Insect Pest Control in Manitoba

Recommendation

The Manitoba Environmental Council recommends to the Minister that learning modules on insect pest control in the Province of Manitoba be developed and integrated into the high school science curriculum. In the cases where aspects of this topic are presently included in modules, we recommend to the Minister that he offer co-operation to the Department of Education, where appropriate, in the development of background and classroom materials which reflect current Manitoba situations.

Background

Environmental education represents an important educational component in Manitoba schools from kindergarten to Grade IX. Beyond these grade levels, education related to the environment is totally optional. Optional extensions at the high school level are chosen by school administrators, teachers and students largely based on the relevancy to students and the comprehensiveness of the materials available. Learning modules of a somewhat controversial nature, such as dealing with some environmental issues, can be highly effective in the classroom.

Chemistry 200 and 300 and Biology 200 and 300 programs recently have been revised in the province by the Department of Education. Both of these course areas have an environmental issue option, for example, the "Agricultural Chemistry" option in Chemistry 300. We urge that learning modules include the following topics in insect pest control: mosquito control, control of agricultural pests, control of household insects, and the chemistry of pesticides and their effects on humans, and that the materials deal with specific insect pests of Manitoba and specific control measures and alternatives relevant for Manitoba.

Environmental Chemicals Committee
D. F. Malley and D. C. G. Muir, Co-Chairs

Education Committee
R. Phillips, Chair

Brief #2: Public Education on Methods of Pest Control

Recommendation

The Manitoba Environmental Council recommends to the Minister that public education on insect pest control be emphasized by the Environment Department so that citizens are better informed about alternative methods of pest control and their relative advantages and disadvantages. One topic in particular that needs to be addressed is nuisance mosquito control.

Background

Manitoba Information Services has recently prepared material dealing with the use of pesticides for control of mosquitoes carrying equine encephalitis. We believe that there should be additional material prepared and distributed on the following topics:

1) larviciding and adulticiding for nuisance mosquitoes stressing the temporary nature of the control achieved by fogging;

2) the important roles of removal of temporary ponds and water trapped in old containers in removing mosquito breeding sites and of personal protection (screened outdoor areas, personal repellants) in reducing the effects of nuisance mosquitoes;

3) safe use of pesticides for household and garden pests;

4) safe disposal practices for pesticide containers used by the homeowner.

Material on these subjects is available from Environment Canada, Agriculture Canada, and the Manitoba Department of Agriculture. However, these pamphlets are not widely distributed, are aimed primarily at agricultural users and do not address the control of nuisance mosquitoes.

The preparation and distribution of this material could be a major project of the proposed Pesticide Control Branch of the Environment Department. Wide distribution of this material via the media especially in the form of television commercials and newspaper advertisements would be the best method of getting this information to the public.

Environmental Chemicals Committee
D. F. Malley and D. C. G. Muir, Co-Chairs

Brief #3: Establishment of a Pesticide Control Branch

Recommendation

The Manitoba Environmental Council recommends to the Minister that a Pesticide Control Branch be established within the Environmental Management Division to regulate the use of and provide information on pesticides in the Province.

Background

Manitobans are major users of pesticides. In the late 1970's, for example, 4,300,000 kg of herbicides were applied each year to farm fields in agricultural areas of the province (Smith, 1982). Large quantities of insecticides (greater than 100,000 kg) per year were also used although exact amounts are not known. At the present time, the Environmental Management Division (EMD) has little involvement in regulation of pesticide use in the province. The EMD relies on the facts that pesticides are approved for use by Agriculture Canada (under the Pest Control Products Act) and that use contrary to instructions on the pesticide container is a Federal offence. Agriculture Canada does not actively check compliance with label instructions, although it does have programs for monitoring pesticides in plant and meat products, as well as for analysis of formulations.

The Clean Environment Commission (CEC) in its report on Mosquito Programs in Manitoba (1982) concluded (p. 93) that there was a need for improved provincial control of municipal mosquito abatement since many small municipalities do not have resources to design their own programs and suggested that the EMD be given a more meaningful role in checking compliance with Federal legislation. Although these suggestions were made in the context of insecticide use in mosquito control, they apply equally well to use of herbicides (e.g., for brush control in rights-of-way) and fungicides (e.g., wood preservation with chlorophenols or creosote) by government departments, Crown corporations, municipalities and private individuals. Currently, control of the aforementioned uses is exempted by Regulation 156/74 of the Clean Environment Act.

Ontario and Alberta have Pesticide Branches within their Environment Departments. The responsibilities of these branches include the licensing and training of commercial pesticide applicators, provision of technical assistance in identification of pest insects or weeds, recommendations on pesticide use for given problems, conducting research programs to evaluate certain limited-use products (e.g., for aquatic weed control or mosquito larviciding), collection of samples (for analysis by provincial labs) to monitor pesticide persistence, worker exposure and crop residues, and providing advice on pesticide toxicology. The Pesticide Branch in Alberta is also involved with collection and disposal of used pesticide containers.

A Pesticide Control Branch organized along the lines of the Ontario and Alberta models and staffed with entomologists, weed scientists and environmental toxicologists would enable the EMD to regulate safe use of pesticides in the Province. It could provide advice to municipalities on pest control, conduct studies on particular problems such as farm worker exposure, persistence of some herbicides in certain soils and leaching into ground water, and safer methods of control. The Branch could also collect data on quantities and use patterns of pesticides in the province which might be of value to epidemiologists. The Branch should also be given the authority under a revised Clean Environment Act to issue permits for municipal mosquito control programs as recommended in the CEC report and to license and train commercial pesticide applicators. It would also have a role in education of the public on pesticide use and would provide

expertise in the event of spills or other accidents involving pesticides.

The proposed branch might be formed in large part from existing personnel in other government departments who now provide advice on pesticide use (e.g., the Soils and Crops Branch of Manitoba Agriculture) and effects on wildlife (e.g., Natural Resources).

References

A. E. Smith, "Herbicides and the Soil Environment in Canada", *Canadian Journal of Soil Science* 62, 433-460.

Manitoba Clean Environment Commission, *Report on Mosquito Control Programs in Manitoba* (1982), 141pp.

Environmental Chemicals Committee
D. F. Malley and D. C. G. Muir, Co-Chairs

Brief #4: Hunting of Timber Wolves

Recommendation

The Manitoba Environmental Council recommends to its Minister that he request the following of the Minister of Natural Resources:

1) permit sport hunting of timber wolves only during the period for which a hunter's big game licence is valid, and only in the area covered by the license;

2) limit the kill to one timber wolf per licence-holding sport hunter.

Background

The timber wolf has recently been removed from the list of predators and has now obtained the status of big game animal. This change has radically affected hunting regulations pertaining to the wolf. If the reason for the change was to afford more control over the killing of timber wolves, additional limits need to be imposed.

At present, the open season on wolves has been set as the period between November 1 and March 31 in all but four game hunting areas. Any holder of a current big game licence can hunt wolves and does not require a special permit to do so. No bag limit has been set up, so an unlimited number can legally be killed for sport by any big game licence holder.

Timber wolves provide a balancing factor in Manitoba's wildlife population. Their presence in Manitoba also provides an enriching factor for those who appreciate the wilderness and wildlife. Since current regulations promote the sport hunting of wolves and will increase the numbers already depleted by trapping and random shooting, a more restrictive hunting regulation appears necessary. The proposed restrictions will provide for better wildlife management and will hopefully ensure the survival in Manitoba of a magnificent animal.

Wildlife Committee
J. B. Nickels, Chairman

Brief #5: Illegal Hunting

Recommendation

The Manitoba Environmental Council recommends to its Minister that he request the following of the Minister of Natural Resources in order to ameliorate the destructive pressures bearing on Manitoba's wildlife:

1) current legislation should be amended to provide substantial minimum fines for those persons convicted of illegal hunting;

2) the public should be made aware of the fact that the conviction of a person engaged in illegal hunting can be obtained without disclosing the identity of the informant.

Background

The serious decrease of certain game species of wildlife in Manitoba and elsewhere across the prairies is due in part to previously unforeseeable hunting pressures. As these wildlife populations have dwindled, it is evident that those detrimentally affected are the wildlife itself, legal hunters, naturalists and the public-at-large. Providing substantial minimum fines for those persons convicted of illegal hunting would offset the advantages now obtained by "poaching" and other illegal acts. In addition, more convictions would be obtained if Manitobans realized they could provide relevant information on illegal hunting without their identity being disclosed. To convict someone for hunting illegally, wildlife management authorities must first know about the incident. Therefore, in order to reduce illegal hunting, the Manitoba Environmental Council makes the above two recommendations.

Wildlife Committee
J. B. Nickels, Chairman

Brief #6: Preservation of Wildlife Habitat and the Noxious Weeds Act

Recommendation

The Manitoba Environmental Council recommends to its Minister that he request the following of the Minister of Agriculture:

1) to review the Noxious Weeds Act with the objective of making it effective, enforceable, and environmentally acceptable;

2) to consider amending the Schedule of Noxious Weeds;

3) to seek input to this review from personnel of the Department of Natural Resources, as well as weed scientists and botanists outside his department;

4) to restrict the declaration of noxious weeds to those species which constitute a demonstrated threat to agricultural production and to delineate the area of the province in which each species is to be declared noxious.

Background

A report recently prepared for the Minister of Natural Resources emphasized the importance of maintaining habitat as a means of preserving wildlife. Certain programs sponsored by private and government agencies have attempted to promote this goal and the Ecological Reserves Act represents a small start toward the protection of communities of special interest. At the same time, there is on the statute books of Manitoba, an act, the Noxious Weeds Act, which was designed to enhance agricultural production but which, in its present form, poses a threat to much of the natural vegetation of the province. Section 3(1) of the Noxious Weeds Act states that all owners or occupants of land "shall destroy all noxious weeds and noxious weed seeds . . .". A noxious weed is defined (Section 1,k) as "a weed named in the Schedule that is declared by a regulation . . . to be a noxious weed . . .". The Schedule (1977) includes some 673 species and varieties of vascular plants and the blanket category "algae". Forty-five of these species are listed in "The Rare Vascular Plant of Manitoba" (White & Johnson, 1980); 32 species are of doubtful occurrence in the province, and 126 have not been reported here according to Scoggan (1957). Approximately one-third of the 1,550 or so species and varieties of vascular plants definitely recorded from Manitoba are contained in this Schedule and may therefore be declared noxious weeds by order-in-council. Under Revised Regulation N110-R1 (1973) and Manitoba Regulation 210/80, approximately 240 vascular plants and "algae" are declared to be noxious weeds in Manitoba. Of this list, 9 species are rare (White & Johnson, 1980), 11 of doubtful occurrence in Manitoba, and 32 are probably not recorded from the province (Scoggan, 1957). Thus, of the established flora of the province, approximately 15% of vascular plant species must be destroyed by all owners and occupants of land.

Available means of destroying weeds chemically and mechanically are relatively non-selective, and so if landowners were to fulfill their statutory obligations, they would destroy large tracts of vegetation with obvious and highly significant implications for the survival of wild animals. There is a dangerous tendency to regard plants that are not crops as dispensable, whereas they play a vital role in the maintenance of environmental quality and ecological balance. This is very true of algae which provide much of our atmospheric oxygen and which are the base of the food chain for fish in our waters. The designation of such an entire group as noxious weeds simply indicates a lack of understanding of basic biological principles. The desirability of maintaining variety of germ plasm is increasingly being recognized by professionals in all biologically related fields. Our emphasis should therefore be on conservation rather than extirpation. Clearly a number of plants on the Schedule do have the capacity, in certain areas and under certain conditions, to limit or severely reduce production of some agricultural crops. Every effort should be made to control these. Very few, however, represent a widespread problem, even in agricultural areas of the province.

As the Noxious Weeds Act now stands, virtually every owner or occupant of land in this province will be in contravention (Sect. 34) of it at all times and therefore liable to a fine of up to $500 and/or imprisonment for up to a year. Retaining such a law, which obviously cannot and will not be enforced, does not engender respect for the law.

References

H. J. Scoggan, "Flora of Manitoba", *National Museum of Canada Bulletin No. 140*, Biological Series No. 47 (1957), 619pp.

D. J. White and K. L. Johnson, "The Rare Vascular Plants of Manitoba", *National Museums of Canada Syllogeus No. 27* (1980), 1-52.

Wildlife Committee
J. B. Nickels, Chairman

Environmental Education Committee Cartoon Contest — 4 - 6 Category — First Prize — Andy Jeanson, Lorette

Brief #7: Manitoba Environmental Network of Government Agencies

Recommendation

The Manitoba Environmental Council recommends to the Minister that a Government Environmental Network be set up in the Province of Manitoba. The network would involve an exchange of pertinent environmental information (e.g., publications, policies, curriculum materials, media productions, environmental issues, conferences, meetings, etc.) within the Manitoba government and between the municipal governments.

Background

A great deal of human energy has been expended by government agencies on various endeavours related to the environment. Unfortunately, many of these environmental activities will go unnoticed or will represent duplicated or overlapped environmental information.

A co-ordinated environmental movement by the government in the province would undoubtedly lead to a more purposeful direction in environmental management within the province. Once a government environmental network has been established within the province, contacts with the existing non-government networks could be established. The outcome of this total network would be a more co-ordinated environmental movement in the province of Manitoba.

Education Committee
R. Phillips, Chairman

Brief #8: Pre-School Environmental Education

Recommendation

The Manitoba Environmental Council recommends to the Minister of Community Services or appropriate Minister that:

1) workshops on how to express an appreciation for plant and animal life be an integral part of the training program for prospective child care workers;

2) "sensitization to our environment" workshops be held (perhaps at directors meetings), to expose all current child care workers to this concept, and that follow-up materials should be provided to further aid the dissemination of this concept.

3) "activities booklets" geared towards showing pre-schoolers an appreciation for nature be made available to day care centres and nursery schools on a regular basis.

Background

Many children between the ages of 2 - 5 are presently enrolled in child care centres throughout Manitoba. Quality day care is increasingly being recognized as an essential service in our society.

Pre-school children may spend anywhere from 4 - 12 hours a day in these centres where they may develop many impressions, values and skills that will be carried throughout a lifetime. Child care can help these children develop a sensitivity towards nature and an appreciation for its beauty. However, in order to accomplish this, child care staff must be capable of presenting an appropriate role model to the children. Children should be exposed to attitudes and behavior that express a respect for nature and its laws. A child should learn not to destroy a spider which enters a play area, but rather carefully place the spider in another location. Young children need not approach plant life as potential floral arrangements or art projects, ready for indiscriminate picking, but should learn to enjoy the plants in their natural state. Training is necessary in order to heighten day care staff's appreciation for nature. Workshops are needed to facilitate a training program for future staff as well as for those already in the field.

Education Committee
R. Phillips, Chairman

Brief #9: Co-ordinated Planning of Environmental Education by Government and Private Agencies

Recommendation

The Manitoba Environmental Council recommends to the Minister that he request the Minister of Education to have her Department:

1) develop close lines of communication with other agencies providing environmental education in the province, especially with those having interpretive centres, such as the Wildlife Foundation of Manitoba, the Manitoba Forestry Association, the City of Winnipeg, and the Manitoba Museum of Man and Nature;

2) join with the above agencies and with the Departments of Natural Resources and of Environment, and other interested organizations in developing, funding, and implementing comprehensive programmes of environmental education for those grade levels that require them;

3) join with the above organizations and appropriate university departments in planning, funding, and implementing effective in-service workshops and courses in environmental interpretation for teachers.

Background

Although environmental education in the schools of Manitoba is at present at a low ebb, it is just as important today as ever to ensure that our children obtain a good understanding and appreciation of the natural environment on which they depend and whose future depends on them. Grassroot development of environmental education is an essential part of the metamorphosis of the student to the informed environmentally-aware citizen. All resources, facilities and communcation channels must be utilized to foster this development in the citizens of tomorrow.

An important part of environmental education is the study of our own Manitoba environment, and it has long been recognized by educators that the most effective means of teaching is to give the student first-hand experience with the environment being studied, where a skilled interpreter can bring to life the concepts in the textbooks. Manitoba is fortunate in having a good number of excellent resource centres that provide outdoor sites for field studies, often with naturalists trained to interpret the natural environment. Although providing a service to school groups has been a major objective of most of these, generally they have neither been initiated nor funded by the Department of Education, but rather by private non-profit organizations that have recognized and attempted to fill the need. Nor has there been close communication between these and that Department in planning environmental education curriculum, activities and programmes so that the centres are optimally utilized to provide the most effective environmental education possible for Manitoba students.

Examples of such centres in south-eastern Manitoba are: in the boreal forest, the Forestry

Museum of the Manitoba Forestry Association at Hadashville; in the aspen parkland, the Fort Whyte Nature Centre of the Wildlife Foundation of Manitoba in Winnipeg and Birds Hill Provincial Park; and in the tall-grass prairie, the Living Prairie Museum of the City of Winnipeg. The Oak Hammock Marsh Wildlife Management Area, whose programme was initiated by the Manitoba Naturalists Society and has been continued by the Department of Natural Resources, plans a major interpretive centre in the future for the prairie marsh.

Education Committee
R. Phillips, Chairman

Brief #10: Provincial Land Use Policies

Recommendation

The Manitoba Environmental Council recommends to its Minister that:

1) provincial Land Use Policies be broadened to provide guidelines for the agricultural industry;

2) some control over agricultural development should be established for areas where significant resource values are present;

3) guidelines for any kind of development be established for those areas which may cause hazardous conditions;

4) similar policies be developed to include water resources;

5) comprehensive inventories of lands containing significant natural and historic resources be prepared and provided to all municipalities;

6) a long term voluntary acquisition program of significant resource areas be developed and implemented to ensure that these resources are not degraded or lost;

7) all members of Boards and Commissions dealing with land use-related matters receive a copy of the Provincial Land Use Policies at the time of their appointment as well as any resource inventory information for any area they are investigating.

Background

In 1978 the Provincial Land Use Policies for the Province of Manitoba received Cabinet approval and were passed as a regulation under the Planning Act in November, 1980. They have now been utilized by the municipal and provincial Planning Branches and rural municipalities for approximately four years in the preparation of municipal development plans.

Hopefully it is the intent of the provincial government continually to review and revise these policies to correct any problems or inadequacies that become evident in the implementation process. With this in mind, the Land Use Committee has a number of concerns and recommendations which we hope will receive serious consideration from the provincial government during their review and revision process.

The major problem we see overall with the Policies is that they fail to provide guidelines for regulation of the primary land user in the province, that is, agriculture. Loss of wildlife and recreational lands and degradation or loss of other natural resource areas such as forests, archaeological and historic sites are addressed by the policies, but the relationship between uncontrolled agricultural development and these problems is ignored. If these Policies are to contribute to responsible stewardship of Manitoba's land resource, they should concentrate less on assuring that agricultural uses are given priority, and more on defining exactly how any use, including agriculture, can be accomplished with long-term optimum benefits and at minimum cost to the environment and the land base.

This problem is particularly apparent in Policy #10, wherein the intent seems to be to recognize the value of renewable resources and the need to protect wildlife and fish habitat. It does, however, exempt agricultural uses and provides for agricultural uses regardless of land capability classification. It would permit preferential agricultural use of prime wildlife lands, even though these same lands may have a low agricultural capability classification. At the very least this should be changed so it is the exception rather than the rule, and should be permitted only if such agricultural uses are deemed compatible with other uses.

Policy #11 on lands subject to flooding and erosion hazards provides good guidelines for use of or development within these areas. Nevertheless, neither this policy nor any other policy provides guidelines for areas which are not in themselves designated as hazardous but which if developed, altered or modified, could create hazardous conditions elsewhere.

The last three years of below-average moisture conditions in southern Manitoba have once again reminded us of the value of our water resources. The Provincial Land Use Policies do not appear to recognize adequately how dependant we are on underground and surface water supplies to meet irrigation, industrial,

municipal and domestic requirements. It was perhaps intended that planning for our water resources would be accomplished through other Acts such as the Water Rights Act or the Conservation Districts Act. However, the Water Rights Act was never designed as a planning document, and cannot meet the demands of today and the future, and the Conservation Districts Act has only been implemented in a small portion of the province. Our land and our water resources are intricately tied together. Therefore, any policies developed for one resource must be integrated with the other.

In order to prepare a comprehensive development plan that recognizes the value of and the need to preserve significant flora and fauna, archaeological and historic, recreational and environmental resources, it is imperative that all municipalities have at their disposal a suitable inventory of these resources in their region. Unfortunately, in many cases, a suitable inventory has not been prepared, and where it has been prepared, it has not always been made available to municipal planning people.

At the present time, major portions of Manitoba's significant resource areas are within private agricultural ownership. As a result, the private landowner bears the cost of preserving these areas for the benefit of all Manitobans. Given the recent financial problems of the agricultural industry, we cannot fault a landowner if he or she tries to obtain an economic return on every acre owned. The only way to prevent the loss of significant resource areas is if they are acquired by the provincial government. In this way the cost of preserving our heritage for future generations will be borne by all Manitobans.

Boards and Commissions are frequently formed to hold hearings on various problems and make recommendations to the Government. The information provided and the ultimate recommendations can have an effect on our land and water resources in this province. Unfortunately, Board and Commission members frequently do not receive and are not aware of the Provincial Land Use Policies.

Land Use Committee
R. B. Fowler, Chairman

Environmental Advisory Council

Bill Kennedy

The Seventh Annual Meeting took place from June 6 - 9, 1982 in Digby, Nova Scotia, and was hosted by the Nova Scotia Environmental Council. Mr. Bill Kennedy represented the Manitoba Environmental Council.

The agenda was divided into three major presentation sessions with workshops thereafter for joint discussion.

The first session dealt with the environmental impact of surface mining in Nova Scotia. Representatives of various advisory councils questioned the merits of the Nova Scotia strip mining program which appeared deficient in its consideration of social impacts in rural communities and of physical impacts such as noise, air and dust pollution associated with strip mining.

The second information and workshop session concerned energy production and the recognition that all forms of energy production cause some effect on the environment. Several key points raised in workshop discussions included the need for environmental impact assessments of energy production proposals and the recognition that the same mix of energy methods or energy strategy will not be valid across Canada. Each region or province should find its own variety of energy solutions. Dr. John Young of St. Mary's University, Halifax, led the discussion.

The third information and workshop session was led by Mr. Ken Fawcett of the Education Division, Environment Department, Government of Saskatchewan. His presentation on the importance of environmental education and on successful means of introducing it into school and community systems sparked lively and informative discussions. Both Saskatchewan and Ontario would appear to be leaders in Canada in this important new field of increasing environmental awareness.

At this particular joint meeting, resolutions of the joint councils were not made, and as such, there was no requirement for individual councils to later approve resolutions. Nevertheless, the findings of the workshop sessions were reported to MEC Board and later to the Council as a whole at the December 1982 meeting.

* * *

Garrison Diversion Update

Bill Aitken

Mr. Ted Arnason, Chairman of the Action Committee on Garrison, sends his regrets that he is unable to attend today's Council Meeting. He has asked that I, as Secretary of the Committee, provide an update.

In June a delegation of twelve Manitobans under the auspices of the Action Committee spent four days calling on Representatives of Congress in Washington. The delegation that represented native people, farmers, municipalities, tourism and industry, told the American decision-makers, many for the first time, of the potential damage the project would do in Manitoba. The delegation, led by Arnason, worked very closely with the Focus Office, Dirk Blevins, the law firm retained by Manitoba, and the Canadian Embassy, while in Washington. The trip was financed through donations from 45 municipalities, and individuals themselves, a fact that was very impressive.

Effects of the visit and the visit of other Manitobans have been reflected in the letters received, the 34 (now expanded to 45) signers of a 'Dear Congressmen' letter drafted by Silvio Conte of Massachusetts, and finally, in remarks that Homer Englehorn made in a CBC interview on December 1 when he asked that Manitobans "butt out" of Garrison Conservancy business. He had just returned from his own lobby trip to Washington where he was reminded of the fact that the Canadians had been there before him. In his speech he repeated the intention to get on with construction of Stage 1 of the New Rockford Canal and with Lonetree Dam. Both of these features are on the Hudson Bay side of the Continental Divide, although he contends they are for projects in the Missouri Basin.

Mr. Arnason has asked me to express the Committee's pleasure with the Garrison Focus Office which was created to answer the citizens' request for funds to fight Garrison. The office and its staff, Claudia Engel, and now Bob Clarkson, has enabled as much or more valuable activity to take place than the volunteers could have achieved.

The Focus Office program of public awareness utilizing summer student help explained the issue to many thousands of Manitobans.

Also successful was the tour of North Dakota media people who spent two days in the province making contact with those who stand to be seriously impacted. Not only will these reporters take back our story to North Dakota, but they may have a much broader perspective when reporting on Garrison stories in their own state.

Garrison proponents will be seeking further funding in an appropriation vote in mid-December. If this funding can be denied, the entire project should come under review and hopefully a new plan can be authorized that will not have the serious implications for Canada contained in the 1965 authorization.

* * *

Submitted at the December 3, 1982 Council Meeting

Environmental Education Committee Cartoon Contest — Open Category — Glenn Sikorski, Winnipeg

Responses to Briefs

Basil M. Rotoff

It is most gratifying to note that our briefs and recommendations are not falling on deaf ears. After an initial commitment by the Minister, Jay Cowan, a constant flow of responses has been reaching us, as soon as reactions were forthcoming from within the various branches and divisions entrusted with any particular aspect of the environment addressed by our technical committees.

We have received three letters pertaining to the brief on Groundwater Management, one very thorough response from Al Mackling, Minister of Natural Resources, and another response from Al Mackling regarding the Chairman's letter drawing the Minister's attention to commercial poaching practices in the Parkland Region.

Essentially, the responses are of three kinds:

1) Recommendation accepted and will be implemented, or cannot be implemented just now because of budgetary constraints;

2) Recommendation addresses measures which already have been implemented and mechanisms are in place to tackle problem;

3) Recommendation not acceptable because of other overriding considerations.

The last two cases reflect the need for some research support as suggested in the Sale Report. Recommending something which is already in place doesn't improve the credibility of the Council. Yet if the problem has been perceived by the members of the Technical Committees, the problems may be one of implementation or administrative interpretation, and should be specifically addressed in the brief. This is where some research support seems indispensible.

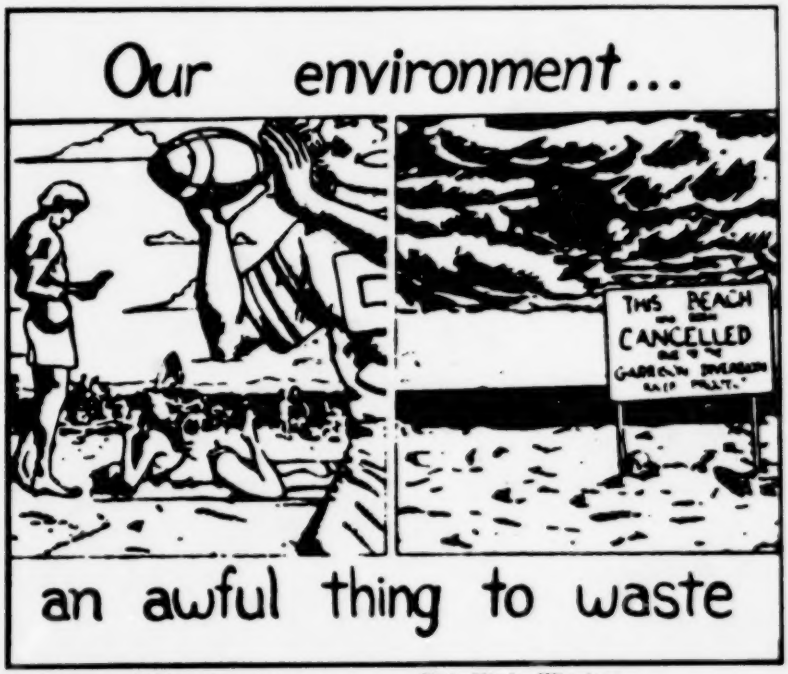
Similarly, the recommendations of the third type could be focused more sharply and directed at the root cause and within the administrative realities.

In the interest of offering greater help and guidance to Technical Committees, I take the liberty of proposing the following recommendations:

> That this summer, the new Board put together some guidelines for the preparation of briefs with specific reference to their format, research support and general procedures, including follow-up on the Minister's responses.

* * *

Presented at May 13, 1983 Council Meeting



Environmental Education cartoon contest — Chris Hlady, Winnipeg

Membership

Honourary Members

The Honourable Jay Cowan
Minister
Environment and Workplace Safety
and Health

Mr. Ron McBryde
Deputy Minister
Northern Affairs, Environment,
Workplace Safety and Health

Dr. W. George Bowen
Assistant Deputy Minister
Environment and Workplace Safety
and Health

Miss Catherine Howlett, Reg. N.A.P.
Parliamentarian

Advisors

The Council wishes to acknowledge the technical assistance from the following persons during the period covered by this report:

A. J. Derksen
Professor E. Dore
Thomas W. Drew
Dr. Roy Ellis
James Murray
Alex Penman
D. R. Thompson
Irwin H. Wiseman
Terry Youmans

Charter Members

Dr. P. W. Aitchison, Winnipeg
Dr. William Bell, Winnipeg
H. Bloy, Winnipeg
Prof. F. M. Kelly, Winnipeg
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Rosemary Malaher, Winnipeg
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Prof. Basil M. Rotoff, Winnipeg

Walter Rybuck, Winnipeg
Gunter A. Schoch, Winnipeg
Mary Scoates, Winnipeg
Prof. H. J. Selwood, Winnipeg
Dr. Jennifer Shay, Winnipeg
Eugene Sheremeta, Winnipeg
Jim Shiells, Winnipeg
Horst Sommerfeld, Winnipeg
Donna Sproule, Winnipeg
Dr. L. J. Stephen, Dauphin
Ron Strynadka, Thompson
Chris Sundevic, Thompson
Dr. W. J. Turnock, Winnipeg
Murray W. Wagner, Winnipeg
Dr. C. Peter Warren, Winnipeg
Olga Weber, Winnipeg
Dr. G. R. B. Webster, Winnipeg
Rev. Murray Wenstob, Swan River
Barry Wild, Winnipegosis

Council Organizations

Association of Manitoba Archaeologists
Canadian Manufacturers Association
Citizenship Council of Manitoba
Canadian Institute of Forestry
Consumers Association of Canada (Man.)
Ducks Unlimited (Canada)
East-Man Regional Development Corp.
Entomological Society of Manitoba
Four Nations Confederacy
Home & School Parent-Teachers Fed. of Manitoba
Interlake Development Corp. Inc.
Junior League of Winnipeg
Manitoba Association of Registered Nurses
Manitoba Association of Urban Municipalities
Manitoba Bar Association
Manitoba Environmental Research Committee
Manitoba Chambers of Commerce
Manitoba Farm Bureau
Manitoba Farm Business Association
Manitoba Federation of Labour
Manitoba Forestry Assn. Inc.
Manitoba Historical Society
Manitoba Institute of Agrologists
Manitoba Medical Association
Manitoba Naturalists Society
Manitoba Nursery & Landscape Assn.
Manitoba Parks & Recreation Assn.
Manitoba Real Estate Assn.
Manitoba Teachers Society
Manitoba Wildlife Federation
Manitoba Women's Institute
Mining Association of Manitoba
National Farmers Union
Norman Regional Development Corp.
Parkland Regional Development Corp.
Pembina Valley Regional Development Corp.
Selkirk — Town Council
Union of Manitoba Municipalities
United Steelworkers of America (Local 6116)
United Steelworkers of America (Local 7106)
University Women's Club of Winnipeg
Winnipeg Labour Council
Winnipeg — City Council

Past Council Chairmen

The first organizational meeting of the Manitoba Environmental Council was held on January 28, 1972 when various task forces were set up to establish the Council's direction and operation. The following have served as the Council's Chairmen:

1972-73 Lloyd Axworthy
1973-74 Loyd Axworthy (to December 5, 1973)
Ken Arenson (balance of term)
1974-75 Ken Arenson
1975-76 Allen M. Lansdown
1976-77 W. J. Turnock
1977-78 Onno Kremers
1978-79 David Punter
1979-80 Rosemary Malaher
1980-81 Basil M. Rotoff
1981-82 Bill Kennedy
1982-83 Bill Kennedy

Finances

The Manitoba Environmental Council is funded by a legislative appropriation to the Environmental Management Division. The cost of administration services, e.g., accounting and secretarial, is largely borne by the Division.

Financial Data

Fiscal year	Voted	Expended	Per Cent
1971-72	N/A	N/A	N/A
1972-73	$ 2,500	N/A	N/A
1973-74	$18,200	$ 7,400	41
1974-75	$17,100	$15,000	88
1975-76	$15,000	$16,200	107
1976-77	$13,100	$11,700	89
1977-78	$16,300	$15,132	92
1978-79	$16,900	$16,621	98
1979-80	$16,900	$20,432	121
1980-81	$16,900	$16,894	99
1981-82	$25,800	$27,437	106
1982-83	$28,400	$36,144*	127

*Note: Additional funding of $7,744 was provided via Special Warrant.

Expenditures

Type	Amount
Salaries	$ 78
Wages & other assistance	$ 32
Professional fees	$ 4,330
Other fees	$ 386
Office furniture, etc.	$ 167
Printing and printed forms	$ 5,690
Publications — Annual Reports	$ 7,577
Stationery & photographic supplies	$ 549
Recording meetings	$ 350
Computer related services	$ 3,484
Vehicles, mileage	$ 786
Advertising	$ 591
Library subscriptions, etc.	$ 46
Courier services	$ 550
Travel — employees	$ 1,128
Special dinners, events	$ 899
Subsistence — Council members	$ 3,229
Transportation — Council members	$ 6,272
Total	$36,144

Publications

The following is a list of MEC publications, several of which are now out of print.

Annual Reports

1: 1973 (32 pp)
2: 1974 (72 pp)
3: 1975 (54 pp)
4: 1976 (79 pp)
5: 1977 (110 pp)
6: 1978 (87 pp)
7: 1979 (148 pp)
8: 1980 (101 pp)
9: 1981 (88 pp)
10: 1982 (68 pp)

Studies

1 J. J. Keleher & K. Z. Hendin, "Manitoba Environmental Problems & Public Opinion" (1974), 4 pp

2 W. G. Leitch & J. J. Keleher, "Garrison Diversion Project Presentations" (1974), 61 pp

3 J. J. Keleher, "Manitoba Environmental Agencies and Activities" (1974), 4 pp

4 D. H. Boyd, "Impacts of the Garrison Diversion Unit on Canada" (1975), 171 pp

5 K. B. Richmond & J. J. Keleher, "Manitoba 2000: Population Size and Distribution" (1975), 130 pp

6 Ken Arenson, Chairman, "Nuclear Energy: Fact and Fantasy" (1975), 35 pp

7 H. J. Selwood, "The Winnipeg Townscape: A Survey Guide" (1977) 35 pp

8 William Bell, Chairman, "Rural Land Use Conflict: Some Solutions" (1977), 130 pp

9 W. J. Turnock, Chairman, "The Energy Issue: Demand and Supply" (1977), 162 pp

10 Alex Fedoruk, Chairman, "Manitoba Water Quality Objectives: How Far Do We Go?" (1978), 145 pp

11 Peter Aitchison, Chairman, "Trees and Pesticides: An Environmental Dilemma" (1978), 37 pp

12 Ken Arenson, Chairman, "Winnipeg 100: Alternative Futures" (1978), 112 pp

13 Rosemary Malaher, Chairman, "Environmental Education: Hope for the Future" (1979), 51 pp

14 John Jack, Chairman, "Parks for Manitoba: Policy and Practice" (1981), 48 pp

15 David Punter, Chairman, "10th Anniversary Celebration", (1982), 41 pp

Topics

1) J. B. Nickels, Chairman, "Environmental Quality Preferences" (1982), 22 pp

Council Staff

J. J. Keleher, M.A. — Executive Secretary until April 29, 1983

Barbara Ediger — Head, Secretarial Pool

* * *

Colophon

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